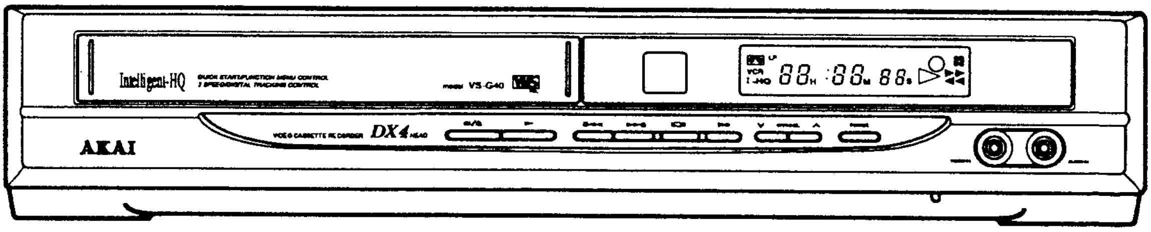
VS-G40,43
VS-G44,45

V04799

AKAI SERVICE MANUAL


Intelligent-HQ
VS-G40
AKAI
DX4
88 88 88

HQ HIGH QUALITY
VHS PAL
VIDEO Plus+

MODEL VS-G40EA

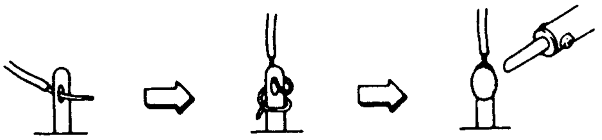
VIDEO CASSETTE RECORDER

MODEL VS-G40EA/EDG/EK/EM/EO
MODEL VS-G43EK/EOH
MODEL VS-G44EK/EOH-V
MODEL VS-G45EOG-V

★SAFETY INSTRUCTIONS

PRECAUTIONS DURING SERVICING

1. Parts identified by the ⚠ (*) symbol are critical for safety. Replace them only with the parts number specified.
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation.
   These must also be replaced only with the specified replacements.
   Examples: RF converters, tuner units, antenna selector switches, RF cables, noise blocking capacitors, noise blocking filters, etc.
3. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers (insulating barriers)
   4) Insulation sheets for transistors
   5) Plastic screws for fixing micro switches
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap the ends of the wires securely around the terminals before soldering.



6. Make sure that wires do not contact heat producing parts (heat sinks, oxide metal film resistors, fusible resistors, etc.).
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. Also check areas surrounding repaired locations.
9. Make sure that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

SAFETY CHECK AFTER SERVICING

After servicing, make measurements of leakage-current or resistance in order to determine that exposed parts are acceptably insulated from the supply circuit.

The leakage-current measurement should be done between accessible metal parts (such as chassis, ground terminal, microphone jacks, signal input/output connectors, etc.) and the earth ground through a resistor of 1500 ohms paralleled with a 0.15 µF capacitor, under the unit's normal working conditions.

The leakage-current should be less than 0.5 mA rms AC.

The resistance measurement should be done between accessible exposed metal parts and power cord plug prongs with the power switch (if included) "ON". The resistance should be more than 2.2 M ohms.

MAKE YOUR CONTRIBUTION TO PROTECT THE ENVIRONMENT

Used batteries with the ISO symbol for recycling as well as small accumulators (rechargeable batteries), mini-batteries (cells) and starter batteries should not be thrown into the garbage can. Please leave them at an appropriate depot.

★ SPECIFICATIONS —

Format	
EA/EK	VHS standard
EDG/EM/EO/EOG-V/ EOH/EOH-V	VHS standard (PAL, MESECAM)
Video recording system	Rotary, slant azimuth two-head helical scan system
Rotary heads	4 video heads
RF input	
EA	System B, G VHF ch 0 - 5, 5A, 6 - 11 UHF ch 21 - 69
EDG	System D, K VHF ch 1 - 12, UHF ch 21 - 69 System B, G VHF ch 2 -12, UHF ch 21 - 69 Cable ch S1'- S3', S1 - S20
EK	System I, UHF ch 21 - 69
EM	System B, G (PAL, SECAM) VHF ch 2 -12, UHF ch 21 - 69
EO	System B, G (PAL, SECAM) VHF ch 2 - 4, 5 - 12 UHF ch 21 - 69 Cable ch S1' -S3', S1 - S20
EOG-V/EOH/EOH-V	System B, G (PAL, SECAM) VHF ch 2 - 4, 5 - 12 UHF ch 21 - 69 Cable ch S1' - S3', S1 - S41
RF output	
EA	System K/G type modulation VHF ch 0, 1 switchable (preset ch 1)
EDG	System K/G type modulation UHF ch 30 - 39 adjustable (preset ch 36)
EM	System B type modulation VHF ch 3, 4 switchable (preset ch 4)
EK	System I type modulation UHF ch 30 - 39 adjustable (preset ch 36)
EO/EOG-V/EOH/EOH-V	System G type modulation UHF ch 30 - 39 adjustable (preset ch 36)
Recording (line input)	
EA/EK	PAL
EDG/EM/EO/EOG-V/ EOH/EOH-V	PAL, SECAM (recorded as MESECAM)
Playback (line output)	
EA/EK	PAL
EDG/EO/EOG-V/ EOH/EOH-V	PAL, SECAM (MESECAM Tape)
EM	PAL, SECAM (MESECAM tape) NTSC 4.43 (NTSC tape) Simulated PAL (NTSC tape playback only)

Video	
Line input level	0.5 - 2.0 Vp-p/75 ohms unbalanced
Line output level	1.0 Vp-p/75 ohms, unbalanced
S/N ratio	More than 45dB
Horizontal resolution	More than 250 lines
Audio	
Line input level	−6 dBs/50 k ohms, unbalanced
Line output level	−6 dBs/1 k ohms, unbalanced
S/N ratio	More than 40 dB (SP mode)
Frequency response	70 - 10,000 Hz (SP mode)
Recording/playback time	
SP mode	240 min. with E-240 cassette
LP mode	480 min. with E-240 cassette
NTSC playback (EM)	160 min. (SP mode)/480 min. (LP mode) with T-160 cassette
Tape speed	
SP mode	23.39 mm/sec.
LP mode	11.695 mm/sec.
NTSC playback (EM)	33.35 mm/sec. (SP mode) 11.12 mm/sec. (EP mode)
Quick finder	
SP mode	Approx. 9 times normal speed
LP mode	Approx. 5 times normal speed
NTSC playback (EM)	Approx. 7 times (SP mode)/9 times (LP mode) normal speed
FF, REW time	Approx. 5 min. with E-180 cassette
Timer	8 programmes /1 year
Clock reference	Quartz crystal
Display	TV screen & FL (Tape counter, Timer etc.)
Power requirements	
EA/EK	240 V AC, 50 Hz
EDG	220 V AC, 50 Hz
EM	110 -127 / 220 - 240 V AC 50/60 Hz
EO/EOG-V/ EOH/EOH-V	220 - 230 V AC, 50Hz
Power consumption	
EA/EK/EM	36 W
EDG/EO/EOG-V/ EOH/EOH-V	37 W
Operating temperature	5°C - 40°C
Dimensions	426 (W) x 82 (H) x 314 (D) mm
Weight	5.0 kg

Standard accessories

Antenna cable	1
Remote control unit	1
Batteries for remote control	2
Operator's manual	1
AC plug adaptor (S-16115)	1 [VS-G40EM (Y7) only]
21 pin cable	1 [VS-G43EK only]

0 dBs = 0.775 V

* For improvement purposes, specifications and design are subject to change without notice.

* VIDEO PLUS AND PLUSCODE ARE TRADEMARKS OF GEMSTAR DEVELOPMENT CORP. VIDEO PLUS SYSTEM IS MANUFACTURED UNDER LICENCE FROM GEMSTAR DEVELOPMENT CORPORATION.

★INFORMATION

SYMBOLS OF MODEL NAMES FOR PRIMARY DESTINATION

The symbols below indicate the destination of each unit.

Symbol	Power Classification	Principal Destination	TV System	
			Color	Broadcast
EA	S	Australia	PAL	B,G
ED	E	China	PAL	D
EDG	E	East Europe	PAL	D,K
EDI	E	China, Hong Kong	PAL	D,K, I
EG	E	Spain, Nothern Europe, Other	PAL	B,G
	Y7	Saudi Arabia		
EK	B	U.K	PAL	I
	Y1	Hong Kong		
EM	E	Middle East	PAL	B,G
	Y7	Saudi Arabia		
EO	E	Holland, Switzerland, Nothern Europe	PAL	B,G
	V	Italy		
EOH	E	Holland, Belgium	PAL	B,G
	V	Italy		
EOG	V	Germany	PAL	B,G
ES	E	South Africa, Ireland, Hong kong	PAL	I
EV	E	South-East Asia	PAL	B,G
	U	Middle East, South -East Asia		
	Y1	New Zealand		
	Y7	Saudi Arabia		
EZ	S	New Zealand	PAL	B,G
EGN	E	Middle East	PAL,NTSC	B,G
	Y7	Saudi Arabia		
S	E	France	SECAM	L
SK	E	Latin America, Oceania, SECAM-OIRT	SECAM	K,K1
SEG	E	France, Switzerland	SECAM, PAL	L,B,G
U	A	U.S.A	NTSC	M
	C	Canada		
UM	U	Latin America	NTSC	M
J	J	Japan	NTSC	M

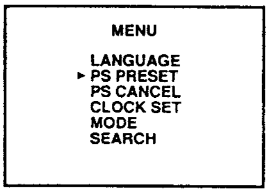
MULTI-FUNCTION MENU MODE

This is an on-screen display of the various modes you can programme via the TV screen.

LANGUAGE	: To select a language for the on-screen displays.
PS PRESET	: To preset TV stations.
PS CANCEL	: To cancel preset TV stations.
CLOCK SET	: To set the clock.
MODE	: To select the BLANK SKIP PLAY, AV MUTE, ON SCREEN DISPLAY and VIDEO SYSTEM modes (VIDEO SYSTEM selection is not available on some models).
SEARCH	: To select the BLANK SEARCH and INTRO SCAN modes.

If necessary, refer to the respective sections in the operator's manual for detailed information.

1. Press the "MENU" button on the remote control unit.
   The menu list screen will be displayed on the TV screen.
   The arrow indicator is automatically set to the "CLOCK SET" position (if the clock has been set already, arrow indicator will be set to the "MODE" position).



2. Select the desired mode by setting the arrow indicator to the appropriate position with cursor "∧" button.
   The arrow indicator moves upwards each time the button is pressed. Pressing the cursor "∨" button will move the arrow indicator downwards.

3. Press the "OK" button.
   The selected function screen will be displayed on the TV screen.

- Press the "MENU" button again to return to the normal screen.

MANUAL TRACKING/PICTURE/STABILITY ADJUSTMENT

The VCR can be adjusted for tracking and picture sharpness anytime it is in the playback mode with the remote control unit.

- **Manual tracking control**
  Press the "<" or ">" cursor botton repeatedly until the picture is clear. During manual tracking adjustment, the tracking position is shown on the TV screen, this will disappear automatically after adjustment has been completed. Use this function when performing the A/C HEAD phase adjustment.
- **Picture sharpness control**
  Press the "∧" button repeatedly to sharpen the picture or press the "∨" button to soften the picture.

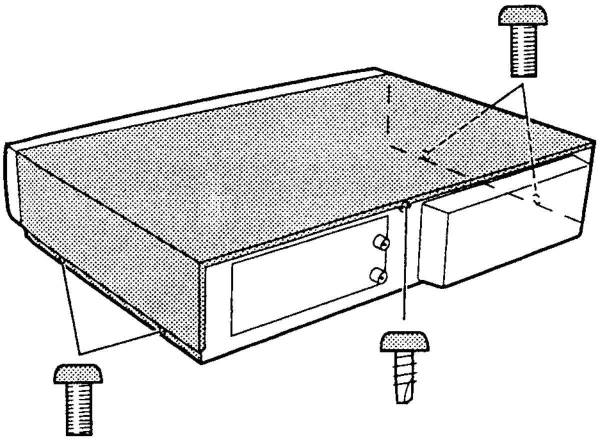
- **Stability adjustment**

1) To correct picture shake during the slow motion or still mode:
   Press "∧" or "∨" cursor button until the picture shake is corrected.
2) To correct tracking during the still mode:
   Press the "<" or ">" cursor button repeatedly until the picture is clear.

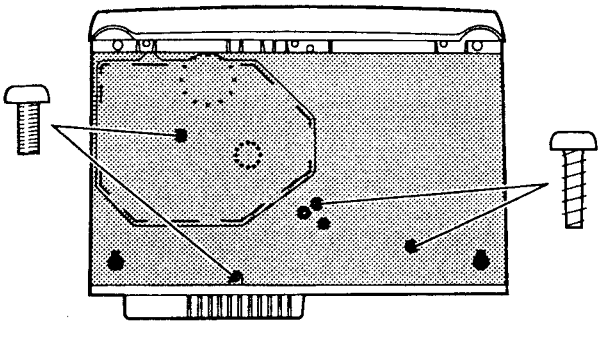
I. DISASSEMBLY

In case of trouble,etc., necessitating dismantling, please dismantle in the order shown in the illustrations.
Reassemble in the reverse order.
When reattaching the FRONT PANEL, hold the cassette loading slot door in the upright (open) position.

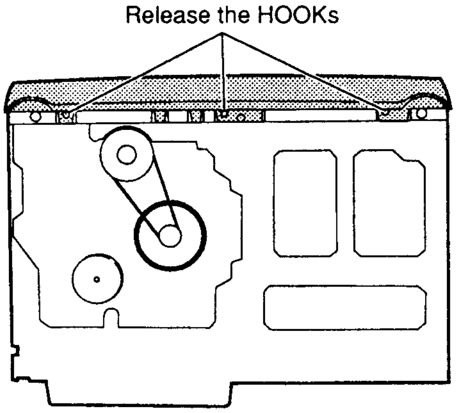
1. Removal of UPPER COVER

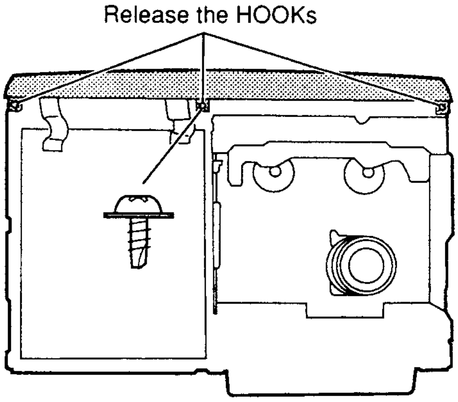


2. Removal of BOTTOM COVER

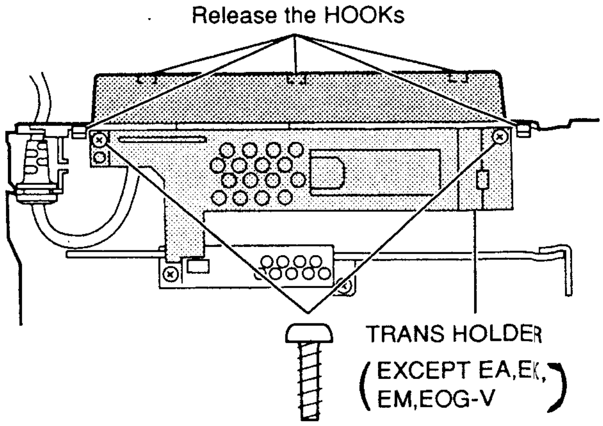


3. Removal of FRONT PANEL


Release the HOOKs


Release the HOOKs

4. Removal of TRANS COVER


Release the HOOKs
TRANS HOLDER
(EXCEPT EA,EK, EM,EOG-V)

II. PRINCIPAL PARTS LOCATION

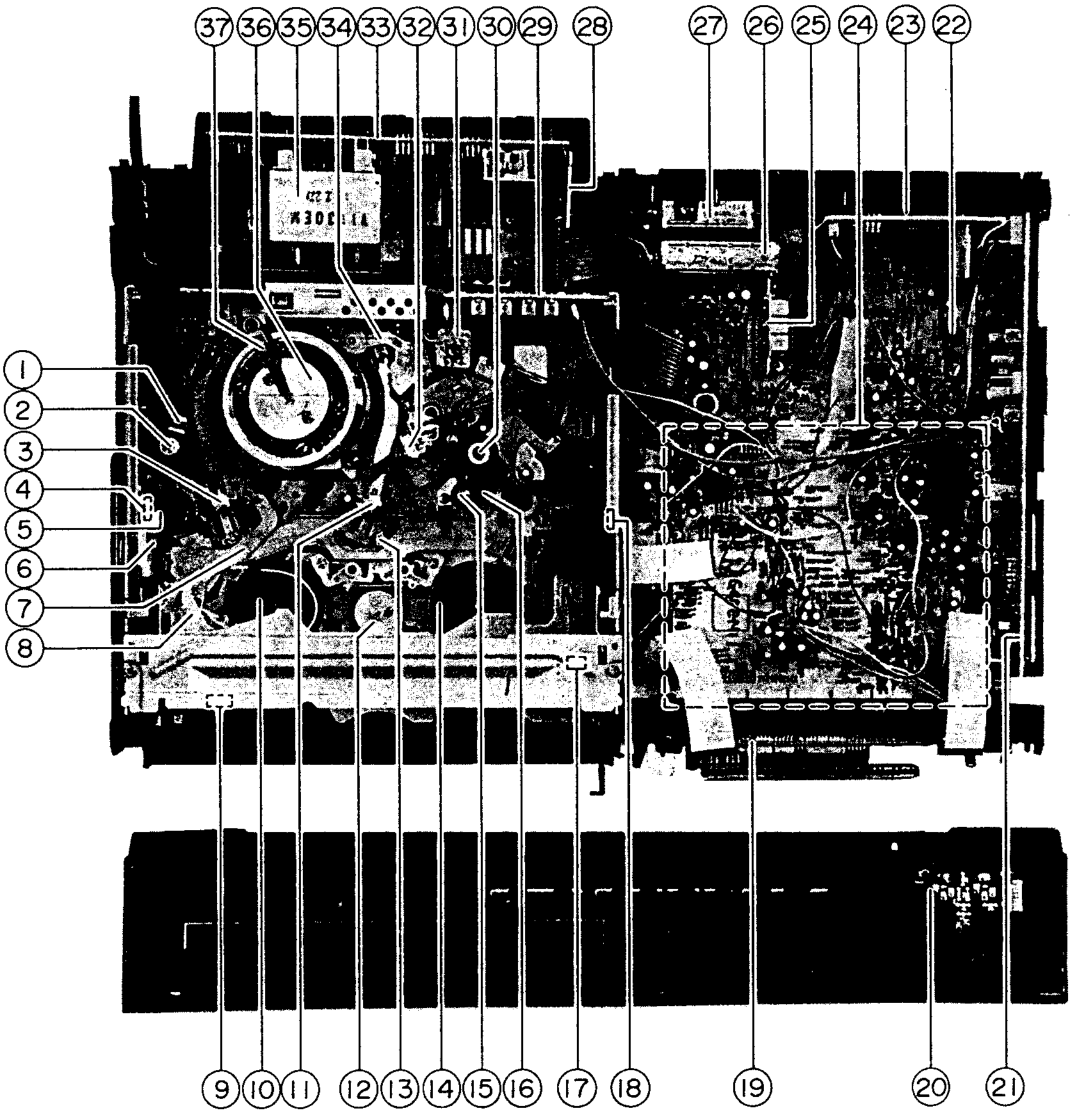


Fig. 2-1 Top view

1. FULL TRACK ERASE HEAD
2. SUPPLY TAPE GUIDE
3. SUPPLY LOADING LEADER
4. SENSOR (S) PCB (END SENSOR)
5. FRONT LOADING GEAR
6. FRONT LOADING SLIDER
7. TENSION ARM
8. CASSETTE LOAD BLOCK
9. REC SAFETY SWITCH
10. SUPPLY REEL TABLE
11. TAKE UP LOADING LEADER
12. IDLER PART
13. SENSOR LED
14. TAKE UP REEL TABLE
15. CAPSTAN MOTOR
16. REVIEW ARM PART
17. S-VHS TAPE DETECT SWITCH
18. SENSOR (T) (START SENSOR)
19. OPERATION (B) PCB
20. PIN JACK PCB (except G40EK, G43EK)
21. MAIN (B) PCB
22. MAIN (A) PCB
23. SUB PCB (EM only)
24. VPST/PDC PCB (EOG-V/EOH-V only)
25. VIF UNIT
26. TUNER UNIT
27. RF CONVERTOR UNIT
28. POWER SUPPLY (2) PCB (EM/EOG-V/EOH-V only)
29. PRE AMP PCB
30. PINCH ROLLER BLOCK
31. DIODE PCB (EM/EO/EOH only)
32. AUDIO/CONTROL/S.ERASE HEAD
33. POWER SUPPLY (1) PCB (EM/EOG-V/EOH-V only)
    POWER SUPPLY PCB (except EM/EOG-V/EOH-V)
34. HEAD CLEANER BLOCK
35. POWER TRANSFORMER
36. VIDEO HEAD DRUM BLOCK
37. EARTH BRUSH PART

* Photograph employed on this page is of model VS-G40EM.

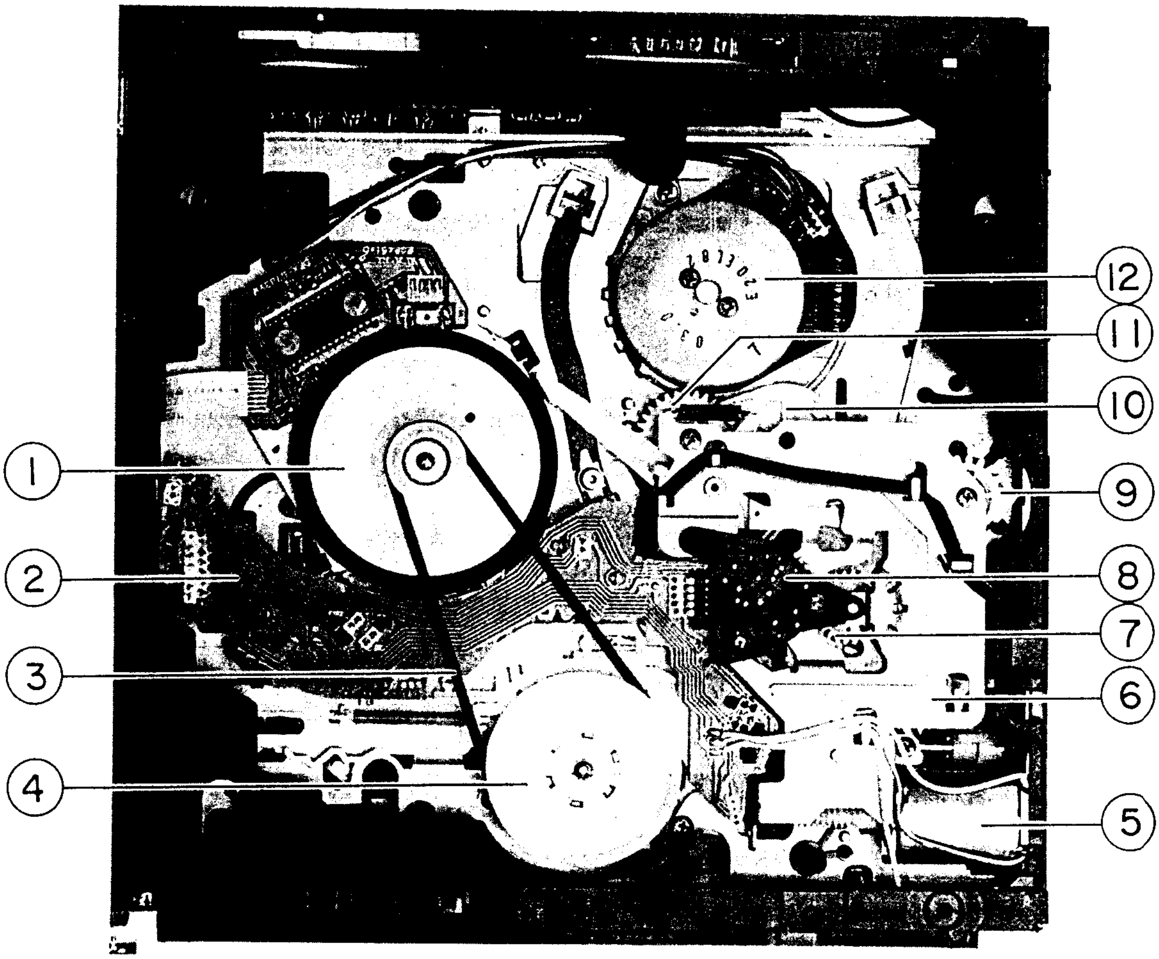


Fig. 2-2 Bottom view

1. CAPSTAN MOTOR BLOCK
2. SENSOR PCB
3. CAPSTAN BELT
4. CLUTCH DISK PART
5. LOADING MOTOR
6. LOADING DRIVE BLOCK
7. CAM SLIDER GEAR
8. MODE SELECT SWITCH
9. FRONT LOADING GEAR
10. TOGGLE (S) GEAR BLOCK
11. TOGGLE (T) GEAR BLOCK
12. DRUM MOTOR BLOCK

III. MAIN COMPONENTS REPLACEMENT

3-1.REMOVAL OF THE EJECTOR BLOCK

Set the loading mechanism to the "EJECT" position by pressing the EJECT button. Then disconnect the AC power plug from the AC socket before proceeding.

3-1-1. Removal of the CASSETTE LOAD BLK

1) Remove the two Ⓐ screws on the UPPER PLATE, as shown in Fig. 3-1 then remove the UPPER PLATE.
2) Lift up the FRONT GUIDE while pushing the CASSETTE LOAD BLK backwardS, then remove the FRONT GUIDE.
3) Gently lift up the front side of the CASSETTE LOAD BLK, then remove it. To avoid damaging the pins of the CASSETTE LOAD BLK and the groove of the MECHA.FRAME, do not use excessive force when removing the CASSETTE LOAD BLK.

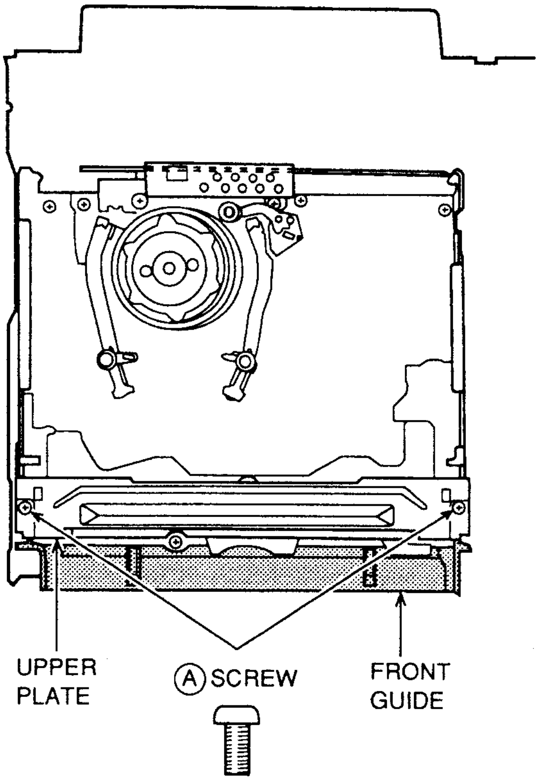


Fig. 3-1

3-1-2. Removal of the LOADING ARM BLK

1) Release the stopper on the right side end of the LOADING ARM BLK's shaft (Refer to Fig. 3-2) by pressing the stopper tab with a flat head (—) screwdriver. Then remove the shaft's right end from the bracket.

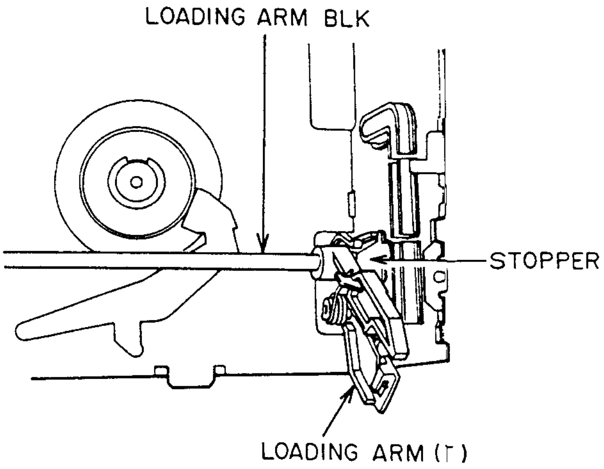


Fig. 3-2

2) Hold the LOADING ARM (T) and turn it 30 degrees clockwise, then pull out the shaft's left end from the bracket. Take special care when removing it to avoid damaging the JOINT and EJECT GEARs. (Refer Fig. 3-3)

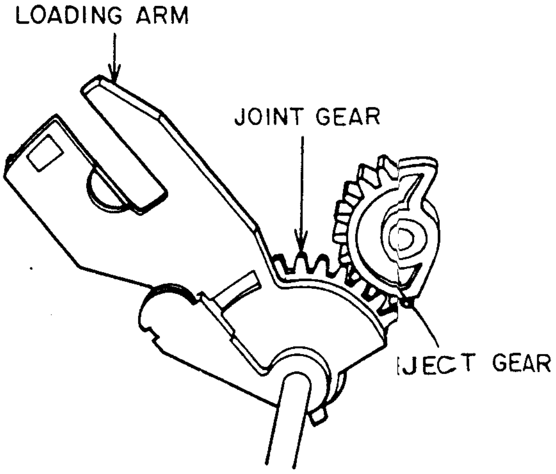


Fig. 3-3

3-2. REMOVAL OF THE SENSOR PC BOARD

* Before proceeding with removal of the SENSOR PCB, the loading mechanism must be set to the "unloaded" position (the position where the CAM SLIDER GEAR's groove mark is visible through the hole of the MODE SELECT SW.) as shown in Fig. 3-4.

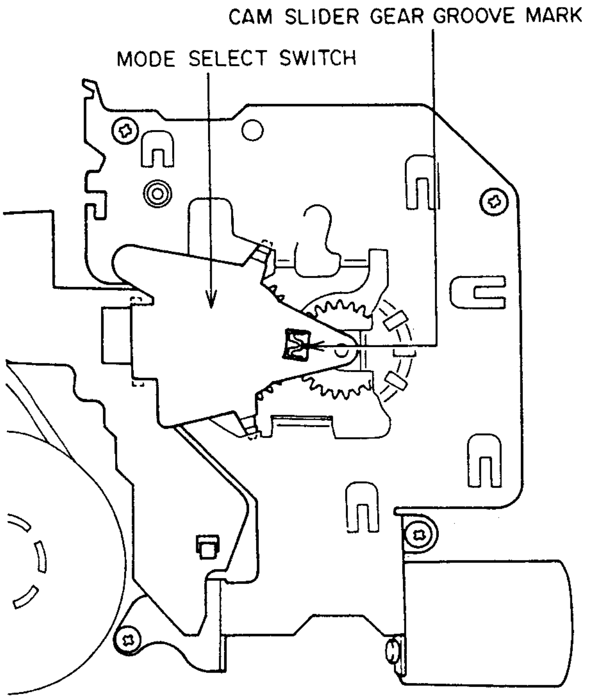


Fig. 3-4

To set the loading mechanism to the "unloaded" position, proceed with one of the following procedures.

1) Insert a video cassette tape which you no longer need. Once the tape has been loaded or has entered the "play" mode, press the POWER button to turn the power off. Disconnect the AC power plug from the AC socket after the cassette tape has been unloaded.
2) Remove the UPPER PLATE, FRONT GUIDE and CASSETTE LOAD BLK. (Refer to 3-1-1. Removal of the CASSETTE LOAD BLK.)
   Plug in the AC power cord. The LOADING ARM BLK will move backward and forward continuously. With your fingers, cover and hold both the SENSOR (S) and SENSOR (T) at the same time when the LOADING ARM BLK is in the backward position. The unit will enter the "play" mode without a cassette tape. Then release your fingers from both the sensors at the same time. After about 10 seconds (when the PINCH ROLLER is disengaged from the CAPSTAN and the SUPPLY REEL stops rotating), press the POWER button on the OPERATION PCB. The mechanism will be set to the "tape unloaded" position a few seconds later.
   Disconnect the AC power plug from the AC power socket.

3-2-1. Removal of the MODE SELECT SWITCH

1) Release the two Ⓐ stoppers as shown in Fig. 3-5.

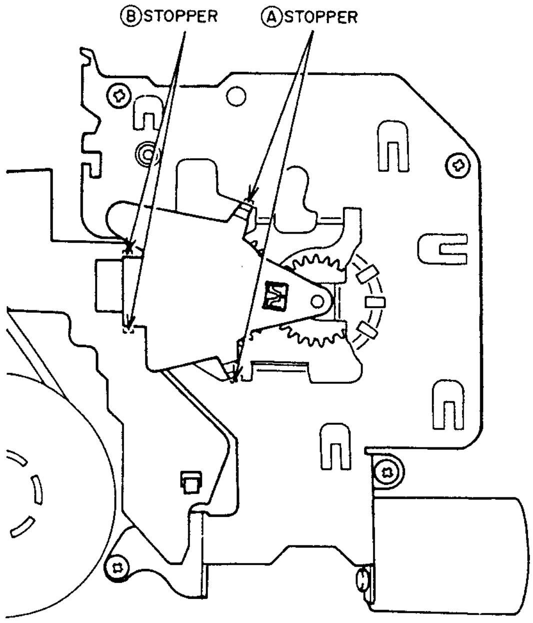


Fig. 3-5

2) Release the two Ⓑ stoppers carefully while pulling up the MODE SELECT SWITCH. Then remove the MODE SELECT SWITCH. (Do not damage the pins of the MODE SELECT SWITCH or the P1 connector on the SENSOR PCB).

3-2-2. Removal of the SENSOR PC Board

1) Disconnect the connector P303 on the MAIN (A) PCB.
2) Remove the capstan belt.
3) Release the Ⓐ, Ⓑ and Ⓒ stoppers as shown in Fig. 3-6. Then remove the SENSOR PCB.

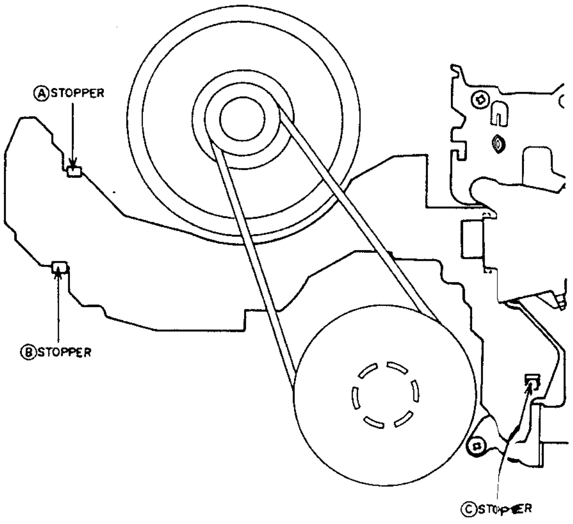


Fig. 3-6

3-3. REMOVAL OF THE LOADING DRIVE BLK

Set the loading mechanism to the "unloaded" position as well as 3-2 (REMOVAL OF THE SENSOR PC BOARD). However, this time, to avoid damaging the tape and mechanical parts, refer to 3-2, ∗ 2) only.

1) Remove the MODE SELECT SWITCH (refer to 3-2-1 Removal of the MODE SELECT SWITCH).
2) Unhook the five wires from each tab. Two wires from the SENSOR (S), two wires from the LOADING MOTOR and one wire from the REC SAFETY SWITCH.
3) Remove the Ⓐ, Ⓑ, Ⓒ and Ⓓ screws, then remove the LOADING DRIVE BLK as shown in Fig. 3-7.

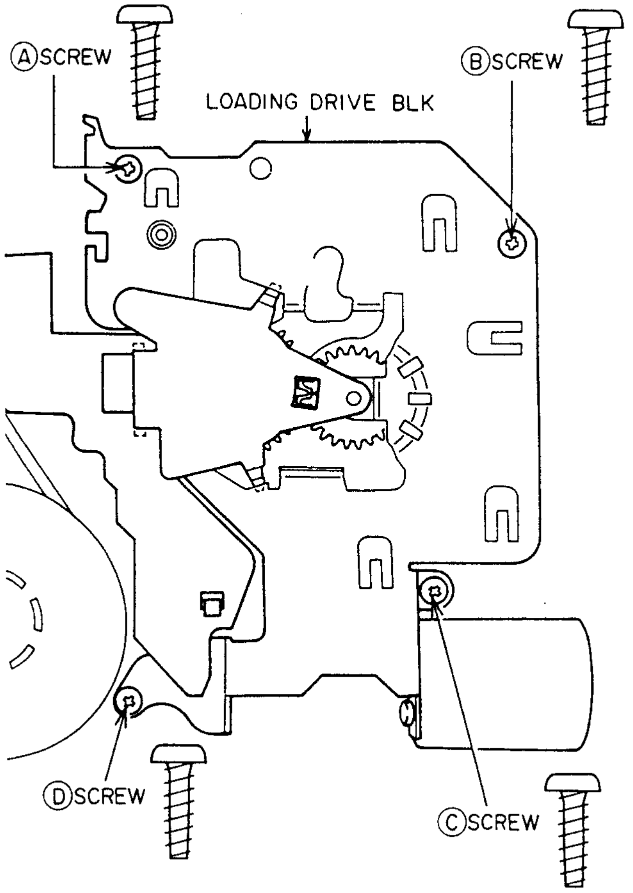

ⒶSCREW
ⒷSCREW
LOADING DRIVE BLK
ⒹSCREW
ⒸSCREW

Fig. 3-7

3-4. REASSEMBLY OF THE LOADING MECHANISM BLK

3-4-1. Position of the TOGGLE GEARs (T) and (S)

1) Set the TOGGLE GEARs (T) and (S) to the unloaded position with your fingers. Align the Ⓐ mark on TOGGLE GEAR (S) with the Ⓐ hole of TOGGLE GEAR (T) as shown in Fig. 3-8.

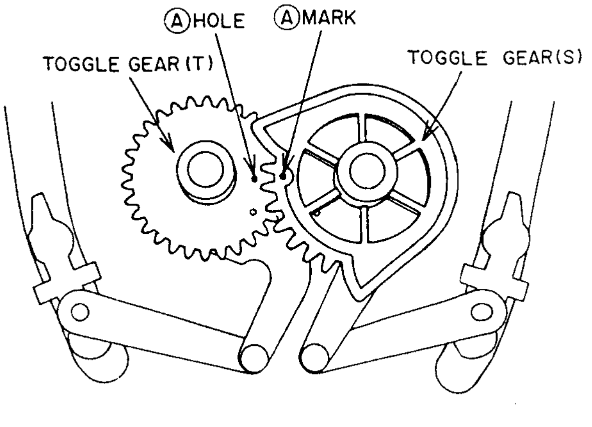

ⒶHOLE
ⒶMARK
TOGGLE GEAR (T)
TOGGLE GEAR (S)

Fig. 3-8

3-4-2. Installation of the CAM SLIDER GEAR & FRONT LOADING GEAR

1) Attach the WORM WHEEL GEAR as shown in Fig. 3-9.

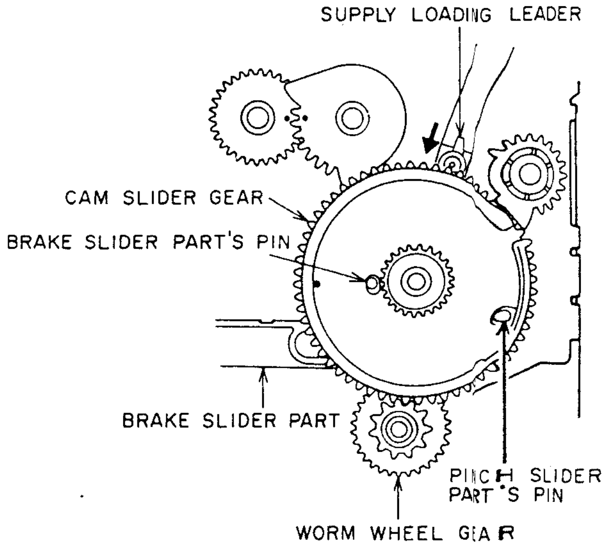

SUPPLY LOADING LEADER
CAM SLIDER GEAR
BRAKE SLIDER PART'S PIN
BRAKE SLIDER PART
PINCH SLIDER PART'S PIN
WORM WHEEL GEAR

Fig. 3-9

2) Set the CAM SLIDER GEAR and adjust the position of the BRAKE SLIDER PART and PINCH SLIDER PART so that both pins appear through the holes on the CAM SLIDER GEAR as shown in Fig. 3-9. When inserting the CAM SLIDER GEAR onto its shaft, press the SUPPLY LOADING LEADER slightly in the direction of the arrow to make installation easy.

3) Attach the FRONT LOADING GEAR as shown in Fig. 3-10 and align the Ⓑ mark on the FRONT LOADING GEAR with the Ⓑ hole of the FRONT LOADING SLIDER as shown in Fig. 3-11.

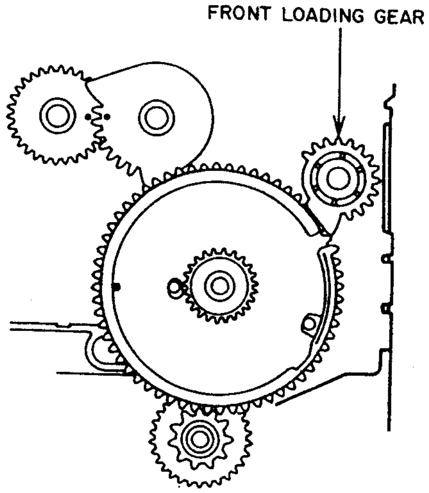

FRONT LOADING GEAR

Fig. 3-10

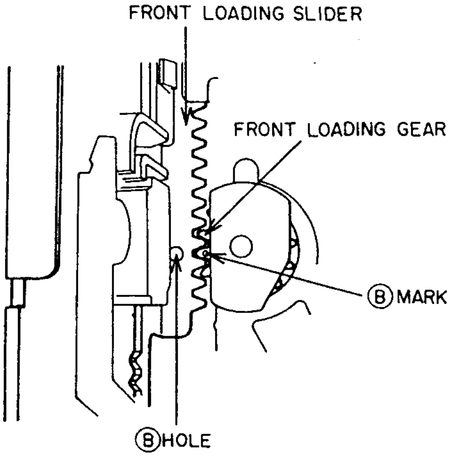

FRONT LOADING SLIDER
FRONT LOADING GEAR
ⒷMARK
ⒷHOLE

Fig. 3-11

3-4-3. Confirmation of the position of the EJECT GEAR

1) Confirm that the EJECT GEAR is in the correct position as shown in Fig. 3-12.

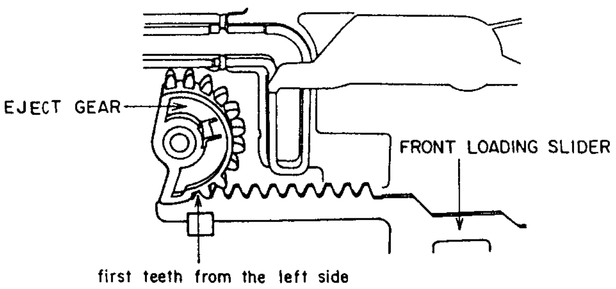

EJECT GEAR
FRONT LOADING SLIDER
first teeth from the left side

Fig. 3-12

2) Install the LOADING DRIVE BLK as shown in Fig.3-13.

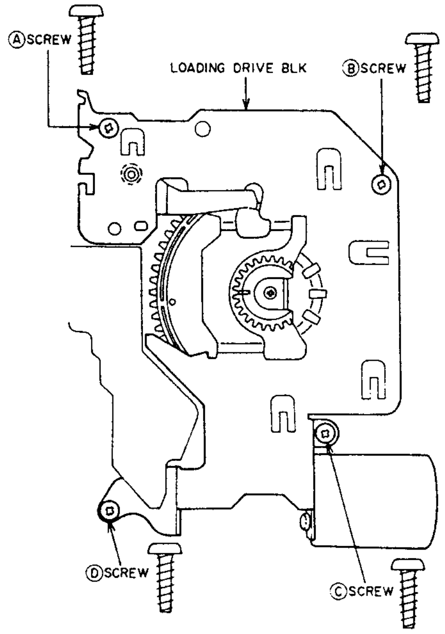

ⒶSCREW
LOADING DRIVE BLK
ⒷSCREW
ⒹSCREW
ⒸSCREW

Fig. 3-13

3-4-4. Installation of the MODE SELECT SWITCH

1) Set the MODE SELECT SWITCH's gear, so that the Ⓒ mark is in the center of the Ⓒ hole as shown in Fig. 3-14.

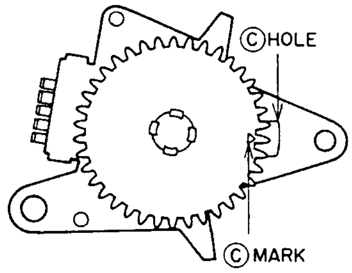


Fig. 3-14

2) Attach the MODE SELECT SWITCH to the LOADING DRIVE BLK and align the hollow of the gear's tooth (reverse side of the Ⓒ mark) with the Ⓒ groove of the CAM SLIDER GEAR as shown in Fig. 3-15.

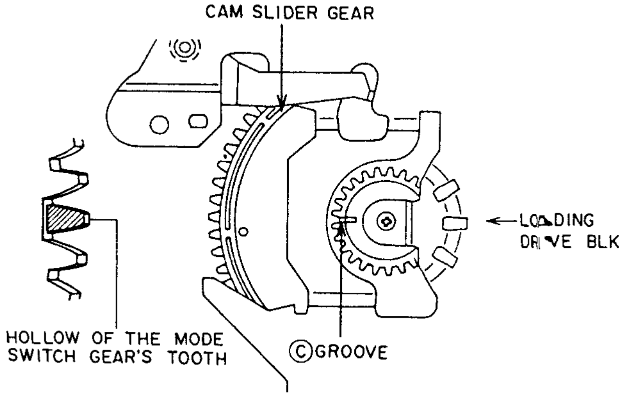

CAM SLIDER GEAR
LOADING DRIVE BLK
HOLLOW OF THE MODE SWITCH GEAR'S TOOTH
ⒸGROOVE

Fig. 3-15

3-4-5. Installation of the LOADING ARM BLK

1) While covering SENSOR (S) with your fingers, connect the AC power plug to the AC socket and then press the "EJECT" button on the OPERATION PCB. The FRONT LOADING SLIDER will reach the "EJECT" position. Then disconnect the AC power plug from the AC socket before you release your fingers from SENSOR (S).
2) Install the LOADING ARM BLK in the reverse order of 3-1-2 (Removal of the LOADING ARM BLK). Position the EJECT GEAR and the JOINT GEAR as shown in Fig. 3-16.

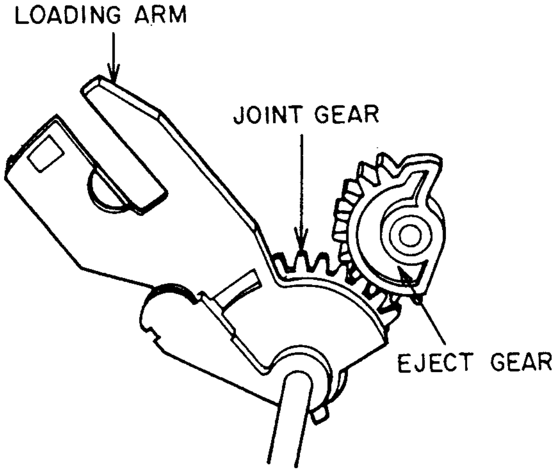


Fig. 3-16

3-4-6. Installation of the CASSETTE LOAD BLK, FRONT GUIDE and UPPER PLATE

1) Attach the CASSETTE LOAD BLK, FRONT GUIDE and UPPER PLATE in the reverse order of 3-1-1 (Removal of the CASSETTE LOAD BLK).
2) Insert a video cassette tape and confirm that the loading mechanism operates properly.

3-5. REPLACEMENT OF THE PINCH ROLLER PART

1) Remove the Ⓐ screw, then remove the PINCH ROLLER part, as shown in fig. 3-17
2) Set the pinch roller so that white plastic spacer side faces chassis when replacing. Then tighten the Ⓐ screw.

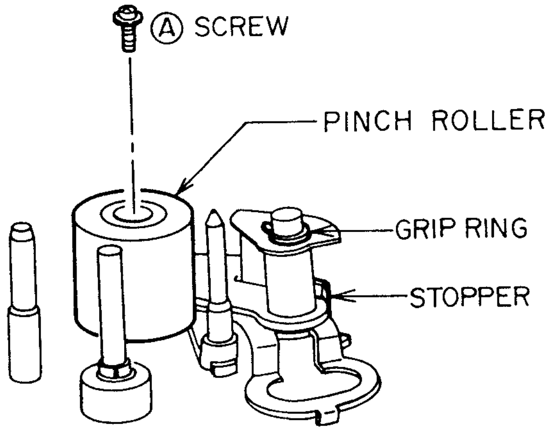


Fig. 3-17

3-6. REPLACEMENT OF THE IDLER PART AND REVIEW BRAKE PART

1) Remove the CASSETTE LOAD BLOCK & LOADING ARM BLK. (refer to 3-1, REMOVAL OF THE EJECTOR BLOCK).
2) Release the stopper of IDLER PART as shown in Fig. 3-18, then remove it.

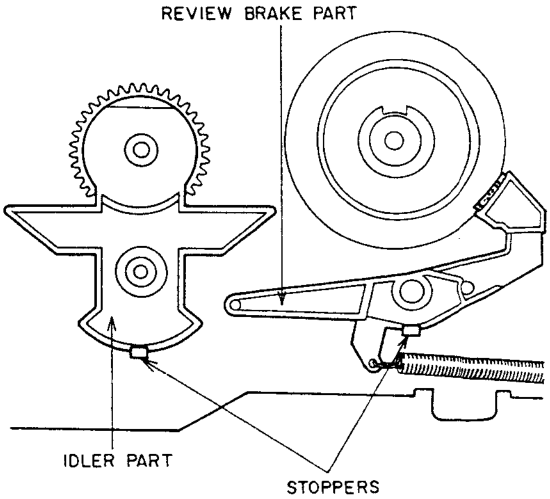


Fig. 3-18

3) Take off the review brake part spring, then release the stopper of the REVIEW BRAKE PART and remove it.
4) Reassemble the parts in the reverse order of steps 1) to 3).

3-7. REPLACEMENT OF THE UPPER DRUM

3-7-1. Removal of the UPPER DRUM

1) Remove one of the PRE AMP retaining screw and remove the EARTH BRUSH.
2) Unsolder the eight relay leads and remove the two upper drum fixing screws as shown in Fig. 3-19.
3) Gently lift and remove the UPPER DRUM.

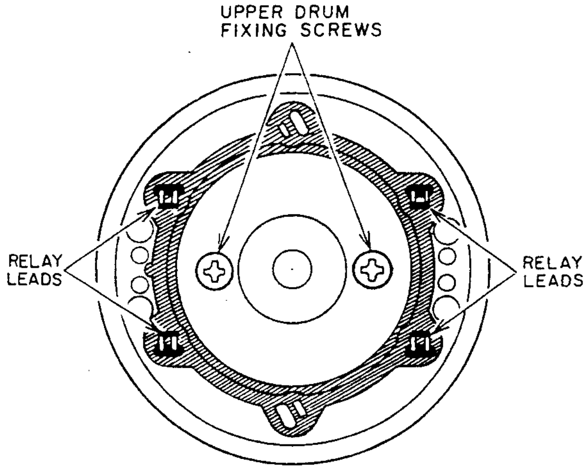


Fig. 3-19

3-7-2. Installation of the UPPER DRUM

1) Attach the UPPER DRUM to the LOWER DRUM ROTOR, so that the upper drum convex Ⓐ and lower drum rotor's white mark line up, as shown in Fig. 3-20.

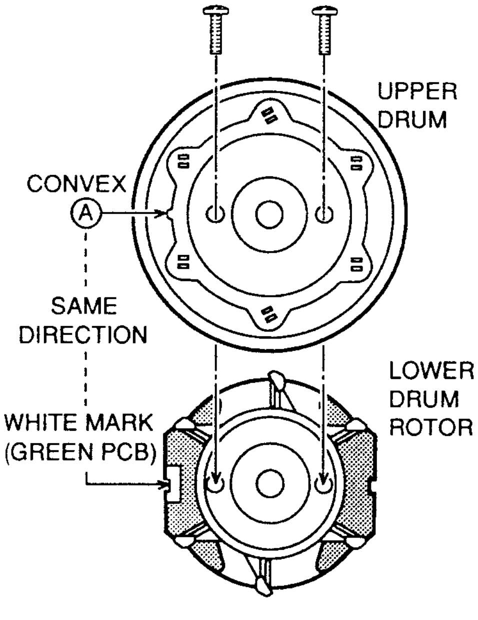


Fig. 3-20

NOTE: Because height precision is required for proper performance, and because head tips are fragile, the following points should be noted when replacing the UPPER DRUM BLOCK.

(a) Do not loosen the set screw on the collar preload.
(b) Before fixing, use alcohol to clean both surfaces where the upper drum and the rotary transformer meet.
(c) If the UPPER DRUM can not be inserted on to the shaft easily during installation, clean the hole in the UPPER DRUM with alcohol and put a little oil on the shaft.
(d) Make sure that the upper drum fixing screw holes, on the rotary transformer part, and the upper drum fixing screw penetration holes match exactly before inserting the fixing screws.
(e) Tighten the two upper drum fixing screws alternately and gradually.

3-7-3. After replacement

After replacement, the following adjustments are necessary for the proper performance.

1) Control head Phase adjustment (IV. MECHANICAL ADJUSTMENT 4-3-3.)
2) PB switching point adjustment. (V. ELECTRICAL ADJUSTMENT Step 1)
3) Video head REC current adjustment. (V. ELECTRICAL ADJUSTMENT Step 6)
4) ENV. DET (I-HQ) adjustment. (V. ELECTRICAL ADJUSTMENT Step 8)

3-8. DRUM MOTOR PC BOARD REPLACEMENT

1) Remove the two Ⓐ screws on the ROTARY PLATE and then remove it.
   Then disconnect the connector on the DRUM MOTOR PCB as shown.

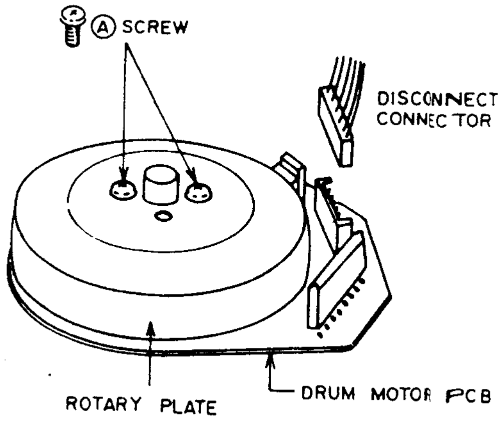


Fig. 3-21

2) Remove the three Ⓑ screws which retain the DRUM MOTOR PCB and replace it.

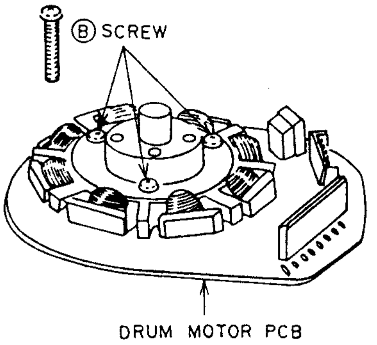


Fig. 3-22

3) Attach the ROTARY PLATE to the collar preload so that the rotary plate Ⓒ hole and collar preload Ⓓ hole line up

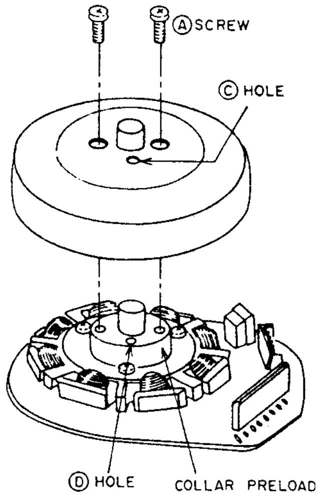


Fig. 3-23

4) After replacement, PB switching point adjustment (V. ELECTRICAL ADJUSTMENT Step 1) is necessary for the proper performance.

3-9. REMOVAL OF THE PRE AMP PCB

1) Remove the TRANS COVER if attached (refer to step 1-4).
2) Remove the Ⓐ screw and remove the EARTH BRUSH as shown in Fig. 3-24.

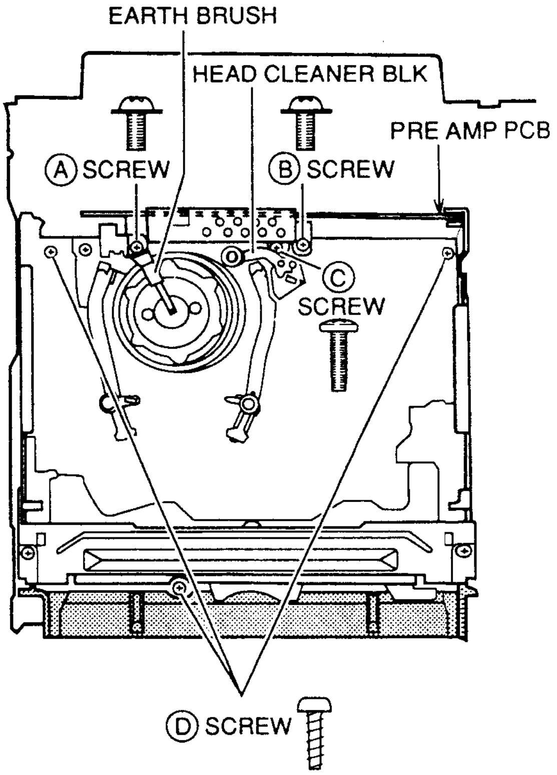


Fig. 3-24

3) Remove the Ⓑ screw and remove the DIODE PCB (if attached) then pull up the PRE AMP PCB carafully.
4) Reassemble in the reverse order for installation. When positioning the PRE AMP PCB, carefully align the P1 connector on the PRE AMP PCB to the VIDEO HEAD's FPC cable not to damage the FPC cable.

3-10. REPLACEMENT OF THE HEAD CLEANER BLOCK

1) Remove the PRE AMP PCB (refer to step 3-9).
2) Remove the Ⓒ screw on the HEAD CLEANER BLOCK.
3) Reassemble in the reverse order for installation.

3-11. REMOVAL OF THE MECHANISM BLOCK (MECHA. FRAME)

1) Remove the PRE AMP PCB (refer to step 3-9).
2) Disconnect the connectors P301, P302, P303 on the MAIN (A) PCB and P1 on the A/C HEAD PCB.
3) Disconnect the connector on the FULL TRACK ERASE HEAD and P4 connector on the OPERATION (B) PCB.
4) Remove the three Ⓓ screws from the MECHA. FRAME as shown in Fig. 3-24.
5) Hold the rear side of the MECHA. FRAME then remove it by pulling it up backwards.
6) Reassemble in the reverse order for installation.

IV. MECHANICAL ADJUSTMENT

4-1. BACK TENSION ADJUSTMENT

1) Prepare a video cassette tape which you no longer needed. Remove both tape reels and the tape protection cover from the cassette tape. Then cover the video cassette's left and right side detection holes with black adhesive tape.
2) Play back the tapeless cassette which you prepared.
3) Confirm the distance between Ⓐ groove on the TENSION ARM and the Ⓐ mark on the MECHA. CHASSIS so that the distance should be within the value shown in Fig. 4-1
4) If the result is not satisfactory, eject the tape and adjust the TENSION ADJUST repeatedly until the result is satisfactory.

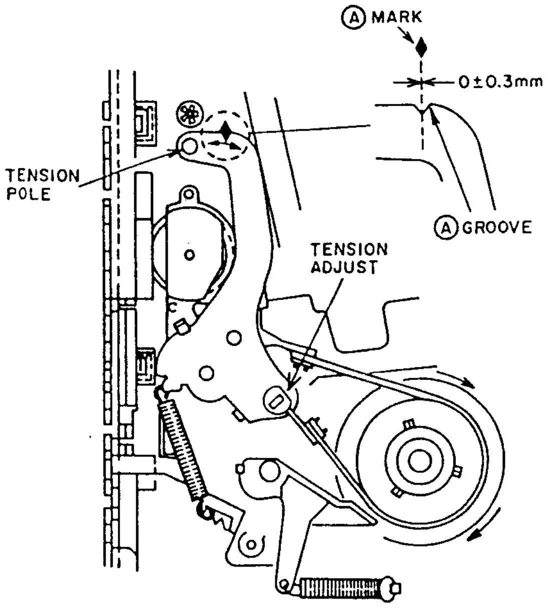


Fig. 4-1

4-2. TAPE TRANSPORT ADJUSTMENTS

NOTE: The following adjustments are required only when an irregularity is found, since these adjustment are precisely set at the factory.

4-2-1. Tape curl adjustment at the TAKE-UP TAPE GUIDE

1) Play back a recorded tape which is no longer needed.
2) Turn the Ⓐ screw on the A/C HEAD BLK, until the edge of the tape barely touches the lower part of the TAKE UP TAPE GUIDE, without any curl or wrinkle.
3) Once the Ⓐ screw is adjusted, A/C HEAD height and azimuth adjustment is required. (Refer to 4-3. A/C HEAD POSITION ADJUSTMENT.)

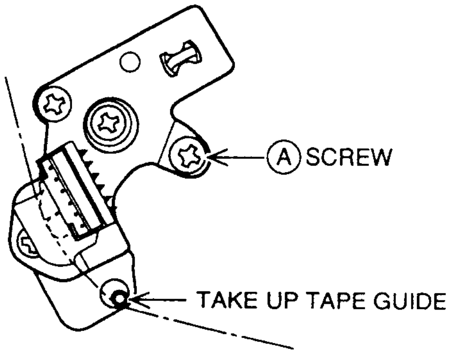
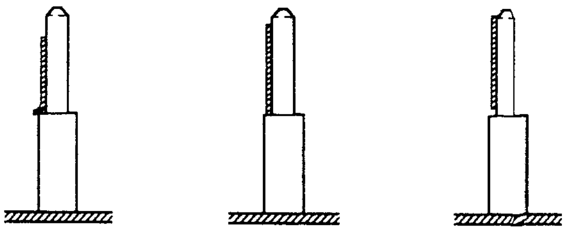


Fig. 4-2

(TAKE-UP TAPE GUIDE)

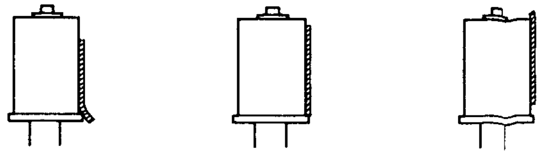


(a) INCORRECT (b) CORRECT (c) INCORRECT

Fig. 4-3

4-2-2. Confirmation of tape curl on the SUPPLY TAPE GUIDE

Confirm that the edge of the tape barely touches the lower part of the SUPPLY TAPE GUIDE, without any curl or wrinkle as shown in Fig. 4-4.



INCORRECT CORRECT INCORRECT

Fig. 4-4

4-2-3. REVIEW ARM height adjustment

1) Play back the beginning part of an E-240 tape and set the unit to the REVIEW mode by pressing the REW button. (Remove the tape protection cover to make the adjustment easier.)

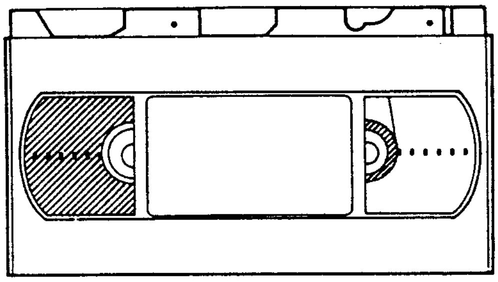


Fig. 4-5

2) Turn the REVIEW ARM height Ⓐ nut so that the edge of the tape barely touches the lower part of the TAKE-UP TAPE GUIDE, without any curl or wrinkle between the TAKE-UP TAPE GUIDE and the CAPSTAN SHAFT as shown in Fig. 4-6 to Fig. 4-8.

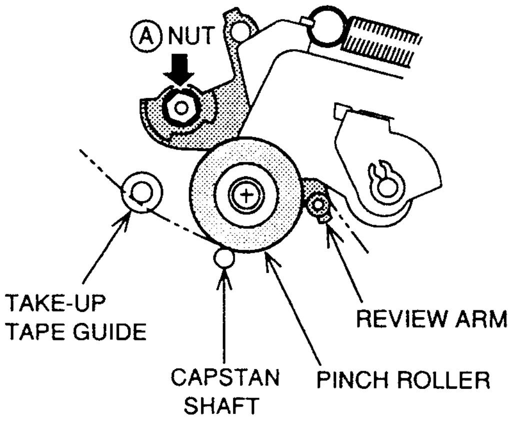
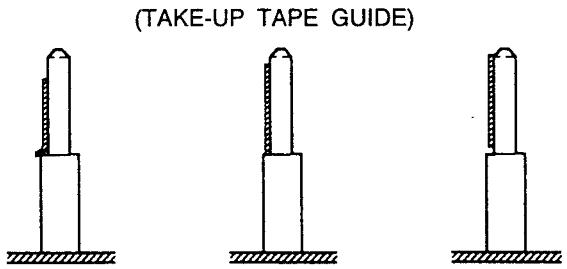
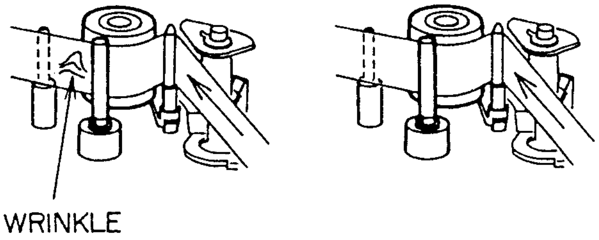


Fig. 4-6



(a) INCORRECT (b) CORRECT (c) INCORRECT

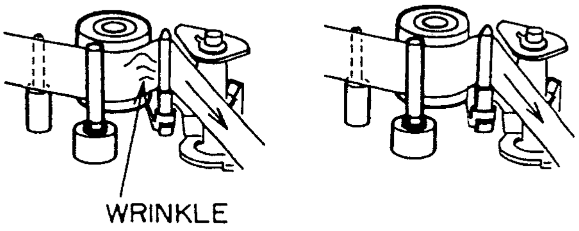
Fig. 4-7



INCORRECT CORRECT

Fig. 4-8

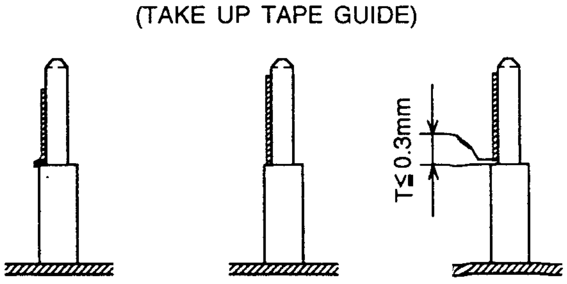
3) Play back the beginning part of an E-240 tape and this time set the unit to the CUE mode by pressing the F. FWD button.
4) Confirm there is no curl or wrinkle near the REVIEW ARM's guide.
If curl or wrinkle of the tape occurs, slightly turn the Ⓐ nut (Shown in Fig. 4-6) until it disappears.



INCORRECT CORRECT

Fig. 4-9

5) Set the unit to the REVIEW mode again. Then confirm that there is no curl or wrinkle near the TAKE-UP TAPE GUIDE. (A small gap may appear after this adjustment, but this is allowable.)



(a) INCORRECT (b) CORRECT (c) CORRECT

Fig. 4-10

NOTE:
1. If the results are not satisfactory, repeat steps 2) to 5).
2. Always play an undamaged tape to obtain satisfactory adjustment.
3. Because an E-240 tape can be damaged easily, due of its thinness, a pre-adjustment with an E-180 tape is recommended.

4-2-4. LOADING LEADER height adjustments

1) Slightly loosen the set screw at the lower part of the LOADING LEADERs (L), (R) so that the LOADING LEADER can be adjusted with reasonable tightness. (Refer to Fig. 4-11.)

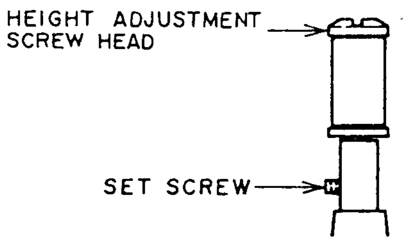


Fig. 4-11

2) Play back reference tape TF-530RFS (AT-751775).
3) Connect an oscilloscope's CH-1 to TR510 emitter (ENVE) on the MAIN (A) PCB and CH-2 to TP2 (V-SWP) on the PRE AMP PCB for triggering.
4) Turn the LOADING LEADER heads with a flat head (—) screwdriver to obtain a flat RF envelope as the ideal envelope, as shown in Fig. 4-12.
5) After adjustment is completed, tighten the loading leader set screws.

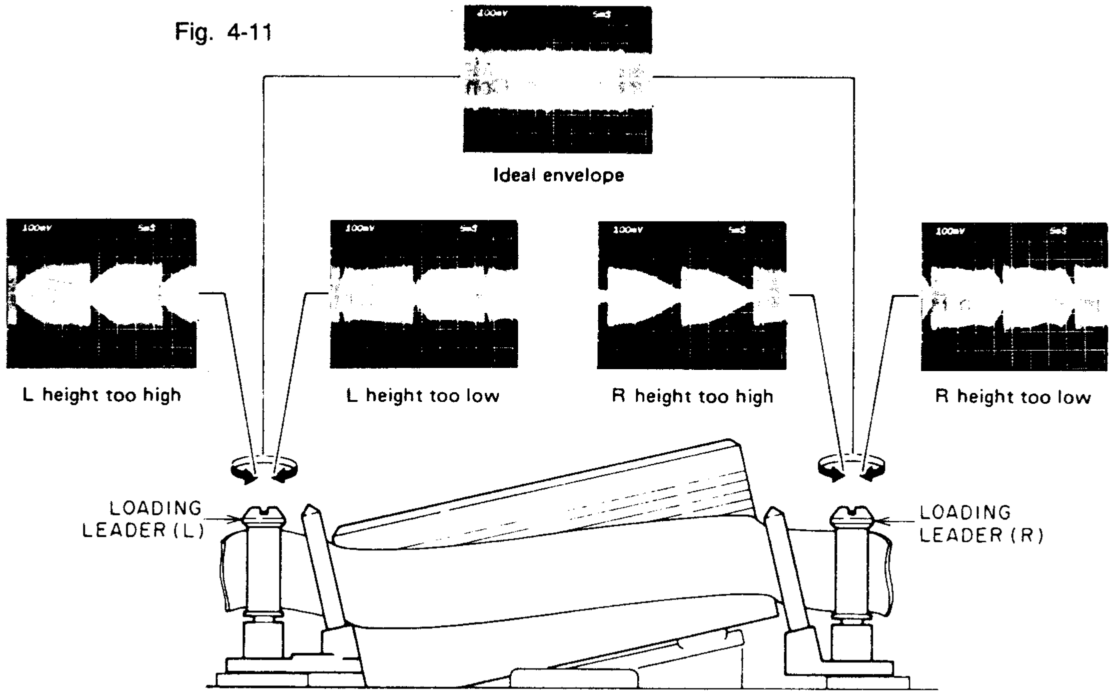


Fig. 4-12

4-3. A/C HEAD POSITION ADJUSTMENT

4-3-1. Azimuth adjustment

1) Connect an AC voltmeter or an oscilloscope to the AUDIO OUT terminal on the rear panel.
2) Play back the reference tape TF-530RFS (AT-751775).
3) Adjust the Ⓑ screw to obtain the maximum audio output.

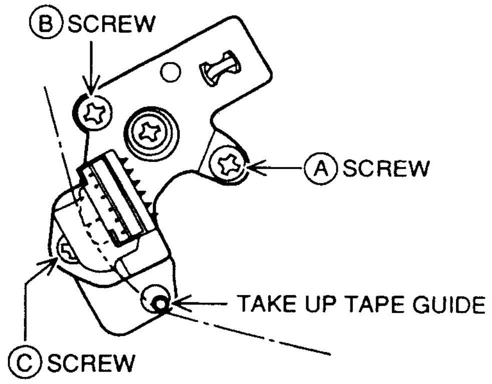
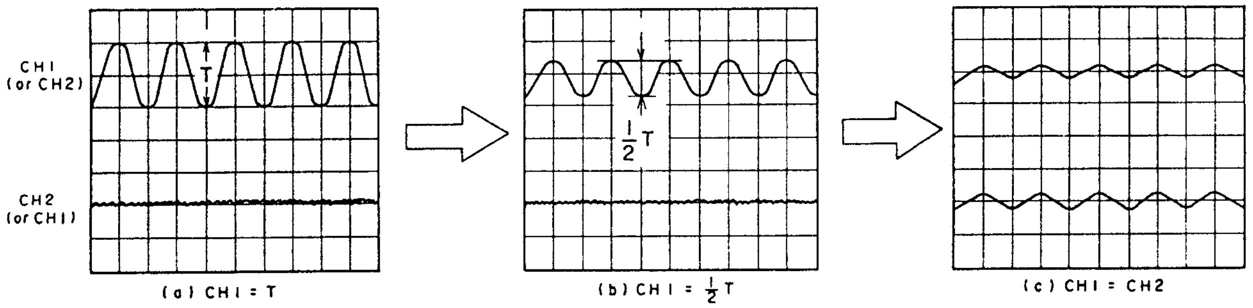


Fig. 4-13

4-3-2. Height adjustment

1) Play back test tape TF-526HH (AT-751788).
2) Connect an oscilloscope's CH-1 to the AUDIO OUT terminal on the rear panel and CH-2 to TP301 (CTL OUT) on the MAIN (A) PCB.
3) Turn the Ⓒ screw to obtain 1/2 of the output level of either CH-1 or CH-2, whichever has an output signal as shown in Fig. 4-14.
   Then set both of the oscilloscope's channels to 100 mV/div and finely adjust the Ⓒ screw until both signals of CH-1 and CH-2 are nearly the same level.
4) Slightly turn the Ⓐ screw until the tape edge barely touches the lower part of the TAKE-UP TAPE GUIDE without any curl or wrinkle as shown in Fig. 4-3.
5) Adjust the head azimuth again. (Turning the Ⓒ screw, or Ⓐ screw, will cause head azimuth mis-alignment. Refer to 4-3-1. Azimuth adjustment.)
6) Confirm that both signals of CH-1 and CH-2 are nearly the same level (confirm that neither of the CH-1 or CH-2 output levels exceed 100 mVp-p). If the result is not satisfactory, repeat steps 3) to 5).



(a) CH1 = T (b) CH1 = $\frac{1}{2}$T (c) CH1 = CH2

Fig. 4-14

4-3-3. Phase adjustment

1) Connect an oscilloscope's CH-1 to the TR510 emitter (ENVE) on the MAIN (A) PCB and CH-2 to TP2 (V-SWP) on the PRE AMP PCB for triggering.
2) Play back reference tape TF-530RFS (AT-751775).
3) Press the ">" or "<" cursor button on the remote control until the "X" mark can be seen in the center position of the tracking range on the TV screen as shown in Fig. 4-15.

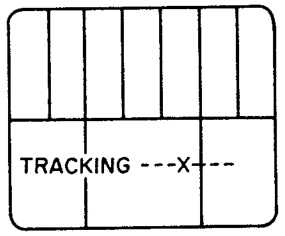


Fig.4-15

4) Loosen the Ⓓ screw slightly so that the A/C HEAD PLATE can be moved with reasonable tightness.

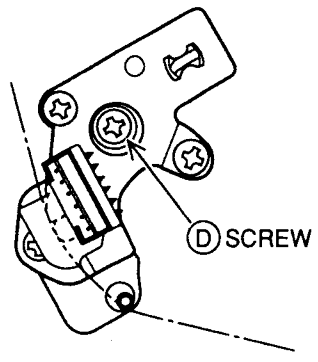


Fig.4-16

5) Insert a philips type screwdriver into the Ⓐ hole through the A/C HEAD BASE as shown in Fig. 4-17.

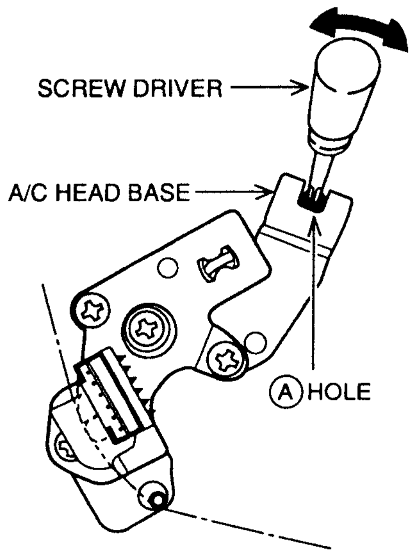


Fig. 4-17

6) Move the A/C HEAD BASE by moving a screwdriver in the direction of the arrow as shown in Fig. 4-17 to obtain the maximum RF output, then tighten the Ⓓ screw.
7) Eject the tape and then re-insert it and play it back again. Confirm that the RF output is maximum after the auto tracking control has been activiated. Next, press the ">" or "<" cursor button on the remote control unit alternately and confirm that the RF output is maximum at the tracking center position. If the result is not satisfactory, repeat the adjustment, step 2) to 6). (This adjustment is very important as this affects to the interchangeability of the recorded tapes.)

V. ELECTRICAL ADJUSTMENT

Precautionary items prior to adjustments

1. The colour bar generator output should be 1.0 Vp-p.
2. The video output terminal should be terminated with 75 ohms (connect dummy load or 75 ohms input TV).
3. Make sure that the A/C head phase adjustment has been adjusted correctly before making PB SWITCHING POINT ADJUSTMENT (refer to step 4-3-3).

The following test tapes are required.

Test tape	Parts No.
TF-527BL	AT-711880
TF-530RFS	AT-751775
TF-532CBS	AT-751360
TF-556AT	AT-751822J

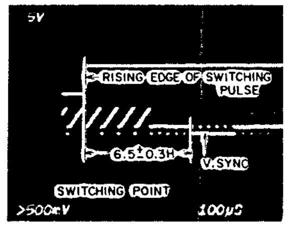
STEP | ADJUSTMENT ITEM

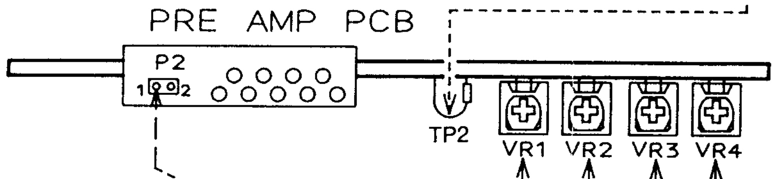
1. MODE and INPUT SIGNAL/TEST TAPE
2. TEST POINT and ADJ part
3. REMARKS (•) & RESULT (*)

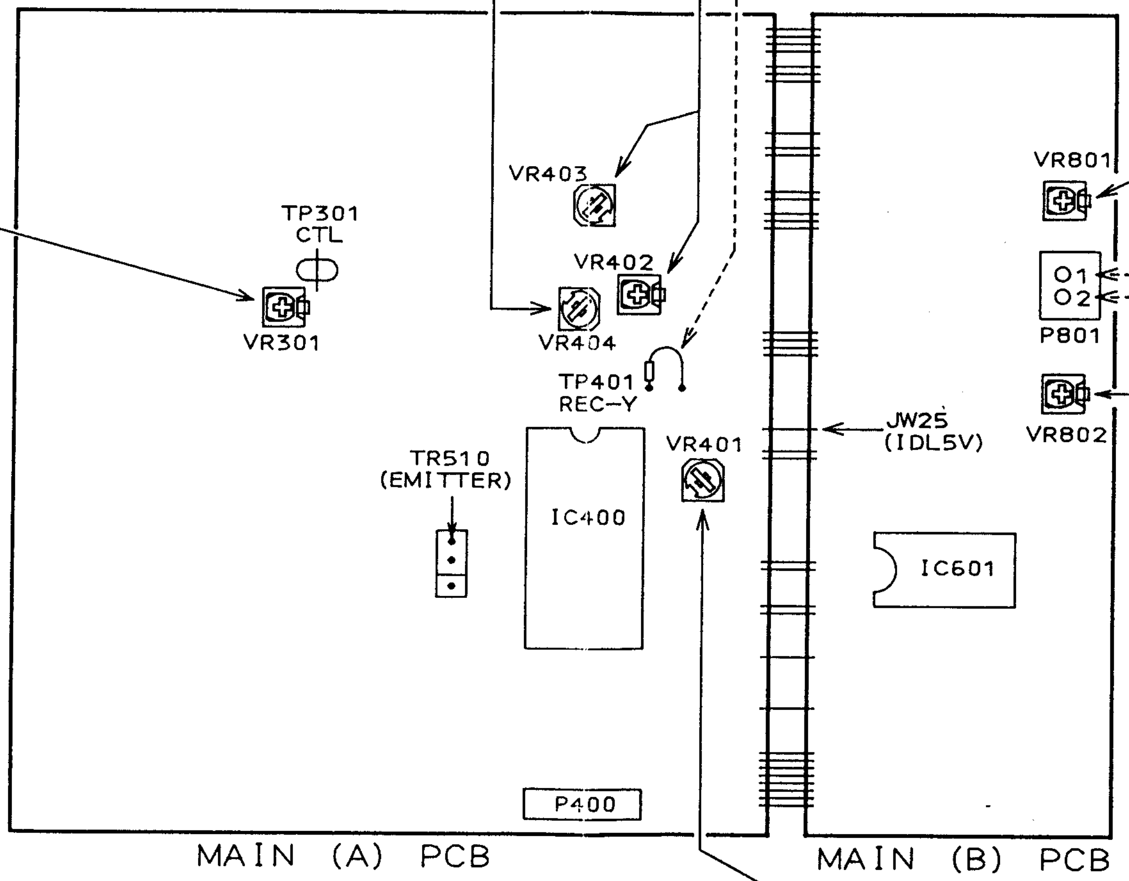
1 | PB SWITCHING POINT

1. "PB", test tape TF-530RFS
2. TP2 (SWP), VIDEO OUT & VR301 (SW.POINT)
3. • Connect an oscilloscope's CH-1 to TP2 (SWP) for triggering and CH-2 to VIDEO OUT.
   - Play back the test tape and set the tracking to the center position with the remote control unit.

   * Adjust VR301 so that the switching point is positioned 6.5 H from the V-SYNC left edge as shown.



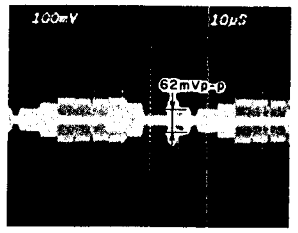


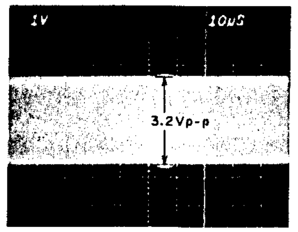


6 | VIDEO REC CURRENT

1. "REC" (LP mode), PAL colour bar signal
2. P2 (REC.CURR) ① pin & VR1 (REC-CHROMA), VR2 (REC-Y)
3. • Connect an oscilloscope's CH-1 to P2 (REC.CURR) ① pin and CH-2 to VIDEO OUT for triggering.
   - Connect the TP401 to the JW25 (IDL5V) with a jumper wire.

   * Adjust VR1 (REC-CHROMA) so that the chroma REC current becomes 62 mVp-p at the burst signal area. (Measure the center value of the noise part of the burst signal.)
   * Disconnect the jumper wire and colour bar input signal, then adjust VR2 (REC-Y) so that the Y REC current becomes 3.2 Vp-p.





8 | ENVELOPE DETECT (I-HQ)

(This adjustment should be performed in the "TEST" mode.)
To set the VCR to the "TEST MODE", press and hold both the "POWER" and "EJECT" buttons on the front panel, then plug in the AC power cord.
The TEST MODE can be cancelled by disconnecting the AC power cord or simply by pressing the RESET button on the front panel.

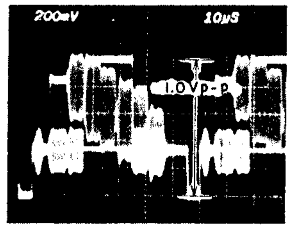
1. "REC" → "PB", PAL colour bar signal
2. FL display & VR3 (SP mode), VR4 (LP mode)
3. • Record the PAL colour bar signal on the test tape TF-556AT and then play it back.
   - Observe the number which is displayed on the minute part of the FL display.

   * Adjust the VR3 and VR4 respectively so that the number displayed on the FL display becomes "90" in both the "SP mode" and "LP mode".

7 | VIDEO PB LEVEL

1. "REC" → "PB", PAL colour bar signal
2. VIDEO OUT & VR404 (PB LEVEL)
3. • Connect an oscilloscope to VIDEO OUT
   - Make a recording on the tape, then play it back

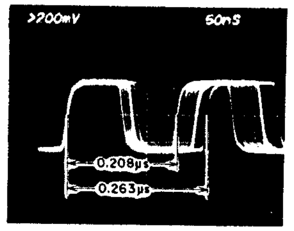
   * Adjust VR404 so that the PB level becomes 1.0 Vp-p



5 | CARRIER SET & DEVIATION

1. "REC", PAL colour bar signal
2. TP401 (REC.Y) & VR402 (CARRIER), VR403 (DEVIATION)
3. • Connect an oscilloscope to TP401 (REC.Y)

   * VR402 (CARRIER) : 0.263 us (3.8 MHz)
   * VR403 (DEVIATION): 0.208 us (4.8 MHz)



2 | AUDIO PB LEVEL

1. "PB", test tape TF-527BL
2. AUDIO OUT & VR801
3. • Connect AC voltmeter to AUDIO OUT

   * -5 dBs

3 | AUDIO REC BIAS

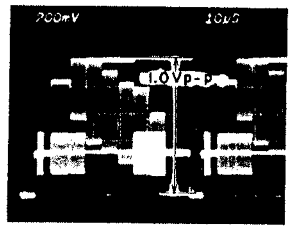
1. "REC", No signal input
2. P801 ① pin, ② pin & VR802
3. • Connect an AC voltmeter to P801 ① pin (GND side) and ② pin.
   (Never connect the AC voltmeter's GND to the VCR's ground.)

   * Adjust VR802 so that the reading on the AC voltmeter becomes 2.5 mV

4 | VIDEO E-E LEVEL

1. "E-E" (STOP mode), PAL colour bar signal
2. VIDEO OUT & VR401 (E-E LEVEL)
3. • Connect an oscilloscope to VIDEO OUT.

   * 1.0 Vp-p



VI. PARTS LIST

ATTENTION

1. **When placing an order for parts, be sure to list the Part No., Model No. and the description of each part. Otherwise, the non-delivery of the part or the delivery of a wrong part may result.**
2. **Please make sure that Part No. is correct when ordering. If not, a part different from the one you ordered may be delivered.**
3. **Since the parts shown in Parts List of Preliminary Service Manual may have been the subject of changes, please use this Parts List for all future reference.**

HOW TO USE THIS PARTS LIST

1. This Parts List lists those parts which are considered necessary for repairs. Other common parts, such as resistors and capacitors, are listed in the "Common List for Service Parts" from which these parts should be selected and stocked.
2. The Recommended Spare Parts List shows those parts in the Parts List which are considered particularly important for service.
3. Parts not shown in the Parts List and "Common List for Service Parts" will not in principle be supplied.
4. How to read the Parts List.

a) Mechanism Block

2. HEAD BASE BLOCK

Ref. No.	Part No.	Description
1	BH-T2023A320A	HEAD BASE BLOCK
2	HP-H2206A010A	HEAD R/P PR4-8FU C
3	ZS-477876	PAN20×03STL CMT
4	ZS-536488	BID20×08STL CMT
5	ZG-402895	SP CS ANGLE ADJUST

SP (Service Parts) Classification

This number corresponds with the individual parts index number in that figure.

b) PC Board

6. MAIN PC BOARD

Ref. No.	Part No.	Description
IC1	EI-324536	IC HD14049BP
IC2	EI-336801	IC MB8841-564M
C1A	EC-338399	C MMY V 223M 250AC [U,E,B,S]
C1B	EC-350949	C MMY V 223M 250DC [J]
C1C	EC-338397	C MMY V 223M 125AC [C,A]
X1	EI-318384	OSC X'TAL NC-18C

Symbols for primary destination

[A] :AAL (U.S.A)
[S] :SAA (Australia)
[B] :BEAB (England)
[U] :U/T (Universal Area)
[C] :CSA (Canada)
[E] :CEE (Europe)
[V] :VDE (Germany)
[J] :JPN (Japan)
[Y] :Custom Version

SP (Service Parts) Classification

These reference symbols correspond with component symbols in the Schematic Diagrams.

The available PC Board Blocks are listed separately.

5. When Part No. is known, Parts Index at end of Parts List can be used to locate where that part is shown in Parts List by its Reference No. listed at right of Part No.

WARNING

⚠ (*) INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURE'S RECOMMENDED PARTS.

AVERTISSEMENT

⚠ (*) IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉDE L'APPAREIL, NE REMPLACER QUE DES PIÉCES RECOMMANDEES PAR LÉ FABRICANT.

1. RECOMMENDED SPARE PARTS

We suggest you to stock the following Recommended Spare Part items listed below since they can cover most of the routine service.

Ref. No.	Part No.	Description
1	AV-B1053A010A	REMOCON BLK RC-W400E [EA,EDG,EM,EO,G40EK]
2	AV-B1051A010C	REMOCON BLK RC-W401E [EOH-V]
3	AV-B1051A010D	REMOCON BLK RC-W401G [EOG-V]
4	AV-B1050A010C	REMOCON BLK RC-W402E [EOH]
5	BB-V1130A020L	MECHA DECK BLK G20EDG
6	BL-V1102A140A	ARM LOADING BLK 425EA
7	BL-V1102A050A	TENSION ARM BLK 425EA
8	BM-400682J3	MOTOR DFX-67B3VWB2 [CAPSTAN MOTOR]
9	BM-401296J1	MOTOR E20EL89 [DRUM MOTOR]
10	BM-387503J	MOTOR PART [LOADING MOTOR]
11	*BT-410491J	TRANS POW V1130 EDG [EDG]
13	*BT-410488J	TRANS POW V1130 EM [EM]
14	*BT-403873J	TRANS POW V1130 EO [EOH,EO]
15	*BT-410606J	TRANS POW V1146 EOG-V [EOG-V]
16	*BT-416855J	TRANS POW V1164 EA [EA,EK]
17	BV-V1102A150A	CASSETTE LOAD BLK 425EA
18	BV-V1102A070A	LEADER S BLK 425EA
19	BV-V1102A080A	LEADER T BLK 425EA
20	BV-V1123A410B	LOWER DRUM BLK X450EGN
21	BV-403410J	RF CONVERTER MDLK6B733A EK [EK]
22	BV-403409J	RF CONVERTER MDLK6D755A EO [EO,EOH,EOG-V,EOH-V]
23	BV-403408J	RF CONVERTER MDLK6E753A EDG [EDG]
24	BV-387611J1	RF CONVERTER YAA21-0808G EV [EM]
25	BV-387610J1	RF CONVERTER YAA21-0809G EA [EA]
26	BV-V1123A420B	UPPER DRUM BLK X450EGN
27	BV-403236J1	VIF UNIT KX EA [EA]
28	BV-403238J1	VIF UNIT KX EK [EK]
29	BV-403239J1	VIF UNIT KX EM [EM]
30	BV-403241J1	VIF UNIT KX EOG [EO]
31	BV-403240J1	VIF UNIT KX EOH [EOH,EOH-V]
32	BV-416729J	VIF UNIT KX-TEK EOG [EOG-V]
33	BV-412399J	VIF UNIT KX-38.9 EDG [EDG]
34	EA-387496J	PC (#) SENSOR
35	*EC-391843J	C DOUBLE FYD0H223Z 5.5DC
36	EC-408376J	C EC V CUT KMG 102M 50.0DC
37	*EC-410530J	C EC V CUT KMG 332M 50.0DC
38	EC-408426J	C EC V F05 LXF8 121M 50.0DC
39	EC-403371J	C EC V F05 LXF8 221M 25.0DC
40	EC-403878J	C EC V T05 LXF8 271M 16.0DC
41	EC-404197J	C EC V T05 SXE8 330M 80.0DC
42	ED-390011J	D LED GL451 INFRARED [D1]
43	ED-390012J	D LED GL4800 INFRARED [D2]
44	ED-403450J	D LED SE303ARF-C INFRARED
45	ED-416503J	D LED SID1010CXM LF51 INFRARED
46	ED-401099J	D SCHOTTKY MA719 T26 40/0.5A [EOG-V]
47	ED-386226J	D SCHOTTKY RB100AT-32T26 40/1 [EOG-V]
48	ED-386031J	D SILICON CHIP MA110-TW
49	*ED-379298	D SILICON DBA20B 100/2.0A
50	ED-366443	D SILICON H MA700FA5 F10
51	ED-307572	D SILICON H 1SS131
52	ED-366684	D SILICON H 1SS136 F05
53	ED-401046J	D SILICON RL104F-E T26 400/1A
54	ED-511907	D SILICON 1N4002 100/1.0A
55	*ED-412107J	D SILICON 1N4003 T26 200/1.0A
56	ED-402204J	D ZENER H HZS11A3 [EA,EDG,EK]
57	ED-391005J	D ZENER H HZS12B1
58	ED-396058J	D ZENER H HZS12B3 [EO,EOH]
59	ED-410359J	D ZENER H HZS15-1 T26
60	ED-397319J	D ZENER H HZS15-2
61	ED-404387J	D ZENER H HZS16-1
62	ED-402230J	D ZENER H HZS36-1
63	ED-408912J	D ZENER H HZS36-3
64	ED-412105J	D ZENER H HZS5B1 T26
65	ED-397233J	D ZENER H HZS5C3
66	ED-387919J	D ZENER H HZS6A1L
68	ED-403743J	D ZENER H HZS6B3
69	ED-405603J	D ZENER H MTZJ10B T26 [EO,EOH,EOG-V,EOH-V
70	ED-403267J	D ZENER H MTZJ3.3B T26
71	ED-405524J	D ZENER H MTZJ36A T26
72	ED-405604J	D ZENER H MTZJ4.3C T26 [EO,EOH,EOG-V,EOH-V]
73	ED-403724J	D ZENER H UTZJ10A
74	ED-405264J	D ZENER H UTZJ10C
75	ED-404031J	D ZENER H UTZJ11B T26
76	ED-403725J	D ZENER H UTZJ12C [EK]
77	ED-403265J	D ZENER H UTZJ15A T26
78	ED-403948J	D ZENER H UTZJ16C T26
79	ED-403947J	D ZENER H UTZJ22C T26
80	ED-403726J	D ZENER H UTZJ30B [EOG-V]
81	ED-404033J	D ZENER H UTZJ33B
82	ED-405265J	D ZENER H UTZJ36C
83	ED-404032J	D ZENER H UTZJ39A
84	ED-403732J	D ZENER H UTZJ5.6A
85	ED-405446J	D ZENER H UTZJ5.6B T26
86	ED-403729J	D ZENER H UTZJ5.6C
87	ED-403730J	D ZENER H UTZJ6.2A [EOG-V]
88	ED-403278J	D ZENER H UTZJ7.5B
89	ED-404086J	D ZENER H UTZJ7.5C
90	ED-403731J	D ZENER H UTZJ8.2C [EOH,EOG-V,EOH-V]
91	ED-403279J	D ZENER H UTZJ9.1B
92	EE-412395J	TV TUNER ENV-578C9F1 EOH [EOH,EOH-V]
93	EE-416524J	TV TUNER TEKE4-034 EO [EOG-V]
94	EE-387607J1	TV TUNER TERB1-008B EK [EK]
95	EE-387604J3	TV TUNER TERE1-007D EOG [EO]
96	EE-387603J1	TV TUNER TERE1-019B EO [EDG]
97	EE-408417J	TV TUNER VTSS6AZV EA [EA]
98	EE-405638J	TV TUNER VTSS6CZ EM [EM]
99	*EF-413079J	FUSE S505 T 250V 1.00A
100	EH-383056J	COMP R RGLE4X 103J
101	EH-386637J	COMP R RGLE8X 103J
102	EH-394838J	DL ADL-FN1344Q [EM]
103	EH-416491J	DL EFDJLA13A
104	EH-394874J	FILTER CE SAF38.9MZA70
105	EH-730625J	FILTER CE SAF38.9MZW70 [EXCEPT EA,EK]
106	EH-373920	FILTER CE SFE5.5MB [EXCEPT EK]
107	EH-373921	FILTER CE SFE6.0MB [EK]
108	EH-412432J	FILTER CE SFSH6.5MDB 6.00MHZ

Ref. No.	Part No.	Description
109	EH-368827	FILTER CE SFS5.5MD 5.500MHZ
110	EH-373918	FILTER CE TPS5.5MB
111	EH-729986J	FILTER CE TPS5.5MB2 [EM]
112	EH-368948	FILTER CE TPS5.5MW 5.5000MHZ [EXCEPT EK,EM]
113	EH-373919	FILTER CE TPS6.0MB [EK]
114	EH-376338	FILTER CE TPS6.5MB
115	EH-714626	FILTER SAW SAF36.9MZ70Z [EA]
116	EH-714628	FILTER SAW SAF39.5MZ70Z [EK]
117	EI-394680J	IC AN3171K
118	EI-373981J1	IC BA10393N
119	EI-373980	IC BA15218N
120	*EI-381575J	IC BA6121
121	EI-353421	IC BA6229
122	EI-366892	IC BA7025L [EDG,EM,EOG-V]
123	EI-414860J	IC BA7279S
124	EI-388360J	IC BA7765AS
125	EI-356457	IC BU4013B
126	EI-414885J	IC CF72306
127	EI-414884J	IC CF72307
128	EI-403234J1	IC LA7391A
129	EI-394856J	IC LC8992
130	EI-401050J	IC LVA523SA2
131	EI-389622J	IC L5631
132	EI-387019J	IC MC1377P
133	EI-403469J	IC MM1068XS
134	EI-414822J1	IC MN675201A-XDS1 QBXSYP2
135	EI-408434J	IC MV1815-1BA
136	EI-412300J	IC M50933-131FP QXDLCD1
137	EI-416842J	IC M50934-069FP QXUKGW1
138	EI-368809	IC M51496P
139	EI-400756J	IC NJM4558L-B
140	EI-400672J	IC S-8052ALB-LE
141	EI-373955	IC S-8053ALR
142	EI-385958J	IC SAA4700
143	EI-408393J	IC ST24C01B1
144	EI-405224J	IC ST24C02AB1/AAB
145	EI-410265J	IC ST24C04B1
146	EI-200573	IC TC4053BP [EM]
147	EI-310036	IC TC4066BP
148	EI-376112	IC UPD6122G
149	EI-405722J	IC UPD6450CX-515
150	EI-414817J	IC UPD75217CW-185 QBXOPP1 [EXCEPT EOG-V,EOH-V]
151	EI-414818J	IC UPD75217CW-186 QBXOPD1 [EOH-V]
152	EI-416736J	IC UPD75217CW-194 QBXOPG1 [EOG-V]
153	EI-410521J2	IC UPD75218CW-028 JXPDC3
154	EI-416782J	IC UPD78014CW-019 QXVPT1
155	EI-410125J	IC V53C464AP-80
156	EI-403451J	OSC CE CSB1200J 1.200MHZ
157	EI-403467J	OSC CE CSB500F40 15.680KHZ
158	EI-368829	OSC CE CSB512P
159	EI-414889J	OSC CE CST10.0MTW-TF01 T05
160	EI-390687J	OSC CE CSU455PL 455KHZ
161	EI-367882J1	OSC CE FCR4.19MC3 4.190MHZ
162	EI-368825M	OSC X'TAL C-002RX 32.768KHZ
163	EI-408433J	OSC X'TAL HC-43/U 27750KHZ
164	EI-394675J	OSC X'TAL HC-49/U 13875KHZ
165	EI-389974J	OSC X'TAL HC-49/U 17.734475MHZ
166	EI-389640N	OSC X'TAL HC-49/U 8000KHZ
167	EI-394673J	OSC X'TAL HC-49/U 8867.238KHZ
168	EI-381632J	OSC X'TAL 86686 4.433619MHZ
169	EJ-412291J	TERMINAL LCD (6) B1043
170	EM-401077J	IND FL FV496G CHARACTER
171	EM-408437J	IND LCD LD-B5444A ENGLISH
172	EO-408381J	COIL FIX 2 C-5344-40 560K
173	*EQ-400153J	RELAY POW AG2013 1TR 12V
174	*ER-328278	R FUSE H ERD2FC 1/4W 10R0G
175	*ER-307565	R FUSE H S10 ERD2FC 1/4W 6R8J
176	*ER-328519	R FUSE H S10 ERD2FC 1/4W 68R0G
177	*ER-331188	R FUSE H S10 ERD2FC 1/4W 8R2J
178	*ER-401039J	R FUSE V T05 ERD2FCV 1/4W 4R7J
179	*ER-400959J	R FUSE V T05 ERD2FCV 1/4W1200G
180	*ER-400605J	R FUSE V T05 ERD2FCV 1/4W15R0G
181	*ER-400688J	R FUSE V T05 RF25SCVTP1/4WR10K
182	*ER-400728J	R FUSE V T05 RF25SCVTP1/4WR12K
183	*ER-405441J	R FUSE V T05 RF25SCVTP1/4WR27K
184	*ER-400729J	R FUSE V T05 RF25SCVTP1/4WR47K
185	*ER-404093J	R FUSE V T05 RF25SCVTP1/4WR56K [EO,EOH,EOG-V,EOH-V]
186	*ER-400689J	R FUSE V T05 RF25SCVTP1/4WR68K
187	*ER-408375J	R FUSE V T05RF25SCPVTP1/4WR12K
188	ES-373099	SW LEAF MTS10110MPC1
189	ES-387465J	SW MODE SELECT MMS00070ZLBO [SW1]
190	ES-414811J	SW SLIDE CHIP SSSS21 01-02N
191	ES-408405J	SW TACT EVQ 235 09K T05
192	ES-349474	SW TACT SKHHAM004A
193	ES-394558J	SW TACT SKHRAA
194	ET-411995J	DETECTOR GP1U581X
195	ET-724885J	TR CHIP RT1N141C [EO,EOG-V]
196	ET-713614	TR CHIP 2SA1235 E,F
197	ET-725820J	TR CHIP 2SC2735J
198	ET-413009J	TR CHIP 2SC2884-Y TE12R T12E
199	ET-356336	TR DTA114ES
200	ET-363953	TR DTA114TS [EM]
201	ET-369248	TR DTA114YS
202	ET-360646	TR DTA143ES [EM]
203	ET-354415	TR DTA144ES
204	ET-373985	TR DTA144TS
205	ET-353897	TR DTC114ES
206	ET-360399	TR DTC114TS
207	ET-354364	TR DTC143TS
208	ET-354414	TR DTC144ES [EXCEPT EK]
209	ET-370310	TR DTC144TS [EOH,EOG-V,EOH-V]
210	ET-361490	TR PHOTO PN268 [TR1]
211	ET-390010J	TR PHOTO PT4800 [TR2]
212	ET-390009J	TR PHOTO PT493F [TR4]
213	ET-364040	TR UN421D
214	ET-353899	TR 2SA1317 S,T,U
215	ET-389803J	TR 2SA933S R,S
216	*ET-366365	TR 2SB1185 E,F
217	ET-388338J	TR 2SB1425 S,E
218	*ET-408841J	TR 2SB1565 E,F
219	*ET-356817	TR 2SB891 Q,R
220	ET-400218J	TR 2SC1740S R,S
221	ET-414816J	TR 2SC2668 Y T05
222	ET-397160J	TR 2SC3330 R,S,T,U,V
223	*ET-404195J	TR 2SC4486 S,T T05
224	*ET-354083	TR 2SD1189 Q,R
225	ET-366168	TR 2SD1292 Q,R [EOG-V]
226	*ET-381175J	TR 2SD1856
227	*ET-391025J	TR 2SD2012
228	ET-405622J	TR 2SD2061 E,F [EO,EOH,EOG-V,EOH-V]
229	*ET-408842J	TR 2SD2394 E,F
230	*ET-411668J	TR 2SD2395 E,F
231	ET-370819	TR.CHIP 2SC3052
232	EW-414864J	CORD FFC BD P1.25 L=110 15P
233	EW-414866J	CORD FFC BD P1.25 L=130 13P
234	EW-414862J	CORD FFC BD P1.25 L=230 18P
235	EW-416798J	CORD QX MA-POW L=215 12P
236	EZ-417485J	IND NAME PLATE (12)-E
237	EZ-414329J	IND NAME PLATE (2)-E
238	HE-390013J	HEAD E HVFME0020A
239	HR-405340J	HEAD COMBO HVMZA1121A
240	HZ-408193J	ROLLER HEAD CLEANER [EXCEPT EK]
241	MB-387289J	BELT CAPSTAN
242	MB-414326J	KEY RUBBER
243	MB-415212J	KEY RUBBER (A6)
244	MB-415216J	KEY RUBBER (B)
245	MI-387294J1	IDLER PART
246	ML-391745J3	ARM DAMPER
247	ML-387350J1	ARM LID OPENER
248	ML-387423J	ARM LOADING BRAKE
249	ML-387277J4	ARM REVIEW PART

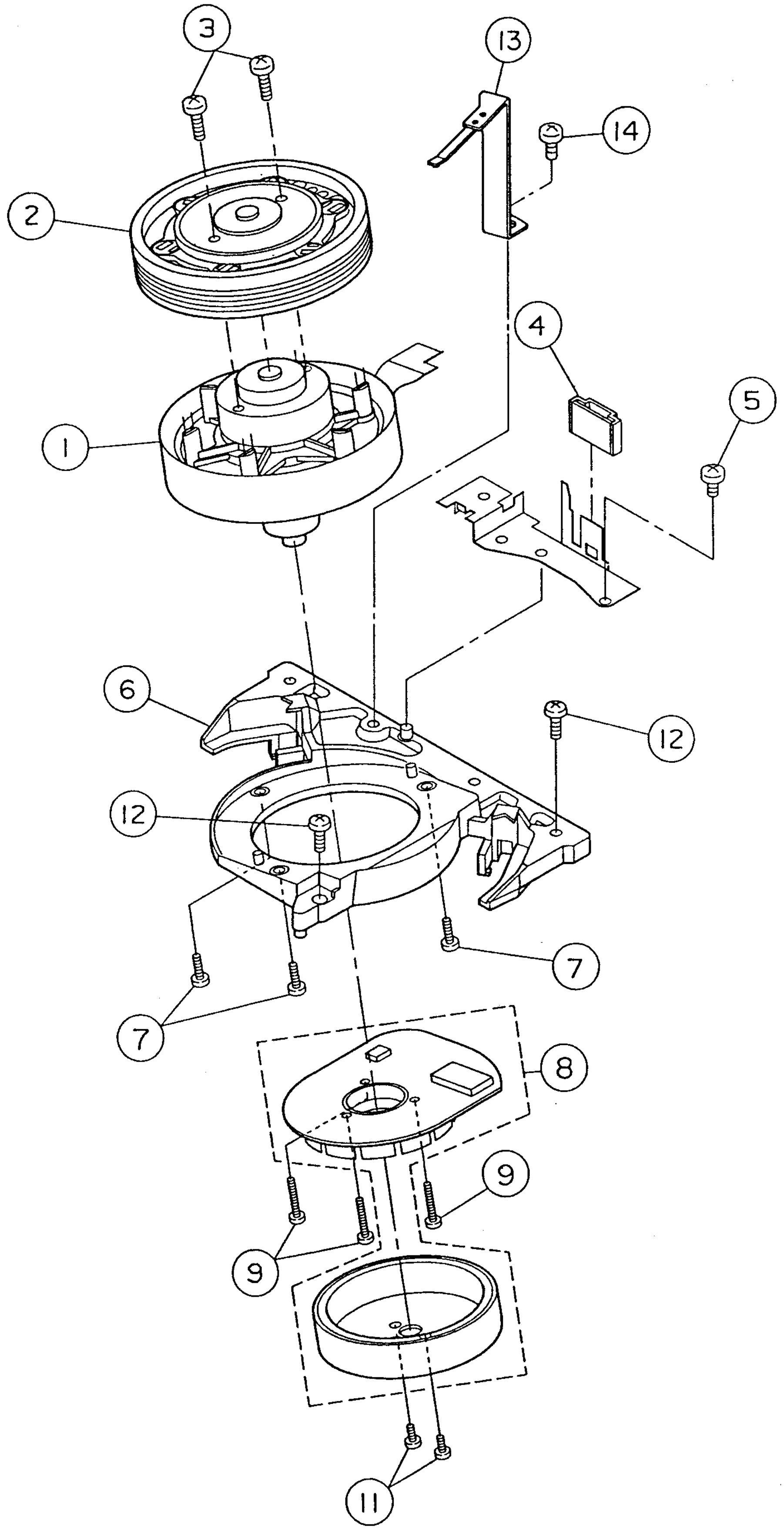
Ref. No.	Part No.	Description
250	ML-387402J1	LEVER TRIGGER
251	ML-387316J	MAIN BRAKE (S) PART
252	ML-387318J	MAIN BRAKE (T) PART
253	ML-387321J1	REVIEW BRAKE PART
254	ML-387324J1	SLIDER BRAKE PART
255	ML-404944J	SLIDER TRIGGER (2)
256	MP-404852J	PINCH ROLLER (2) PART
257	MR-387406J	HOLDER THRUST WORM
258	MR-391968J	PULLEY TRIGGER (2)
259	MR-407378J1	ROLLER IMPEDANCE (2)
260	MT-390954J1	DISK (2) PART
261	MT-407370J	DISK (4) PART
262	MZ-387298J4	DISK CLUTCH PART
263	MZ-387331J2	GEAR CAM SLIDER
264	MZ-387335J	GEAR EJECT
265	MZ-387333J1	GEAR FRONT LOADING
266	MZ-V1102A090A	GEAR TOGGLE (S) BLK 425EA
267	MZ-V1102A100A	GEAR TOGGLE (T) BLK 425EA
268	MZ-387332J	GEAR WORM WHEEL

2. HEAD DRUM BLOCK

Ref. No.	Part No.	Description
1	BV-V1123A410B	LOWER DRUM BLK X450EGN
2	BV-V1123A420B	UPPER DRUM BLK X450EGN
3	ZS-321298	BID30X08STL CMT
4	SZ-387388J	HOLDER FPC
5	ZS-358936	ST BID30X06STL CMT
6	MA-387474J3	BASE DRUM
7	ZS-563444	BID26X08STL CMT
8	BM-401296J1	MOTOR E20EL89 [DRUM MOTOR]
9	ZS-467796	PAN26X12STL CMT
11	ZS-379350	PAN30X06STL CMT
12	ZS-336714	ST BID30X12STL CMT
13	VT-401282J	EARTH BRUSH PART AG
14	ZS-409216J	ST PAN30X07STL CMT C080

NOTE:
Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

HEAD DRUM BLOCK



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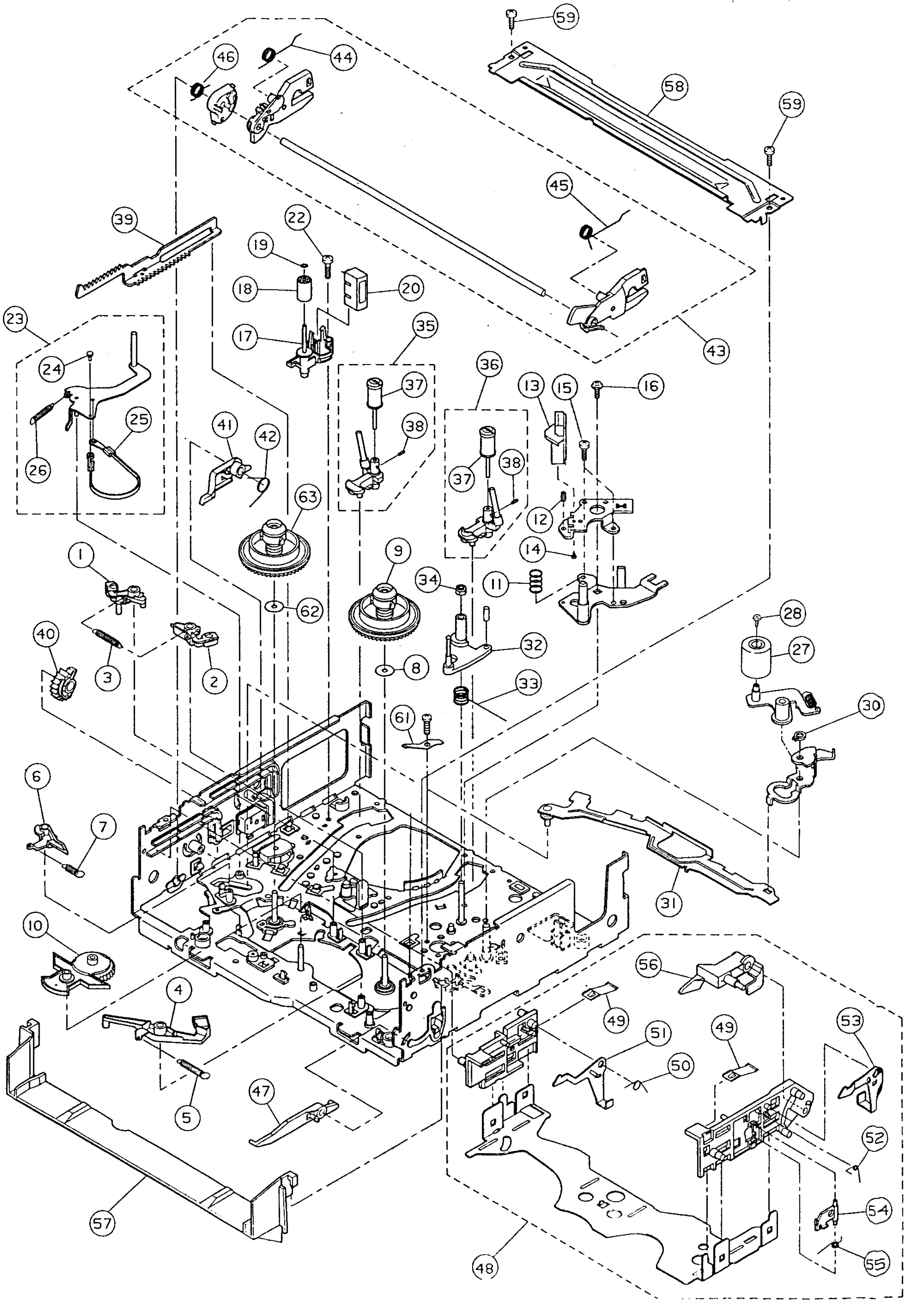
MECHA BLOCK (1)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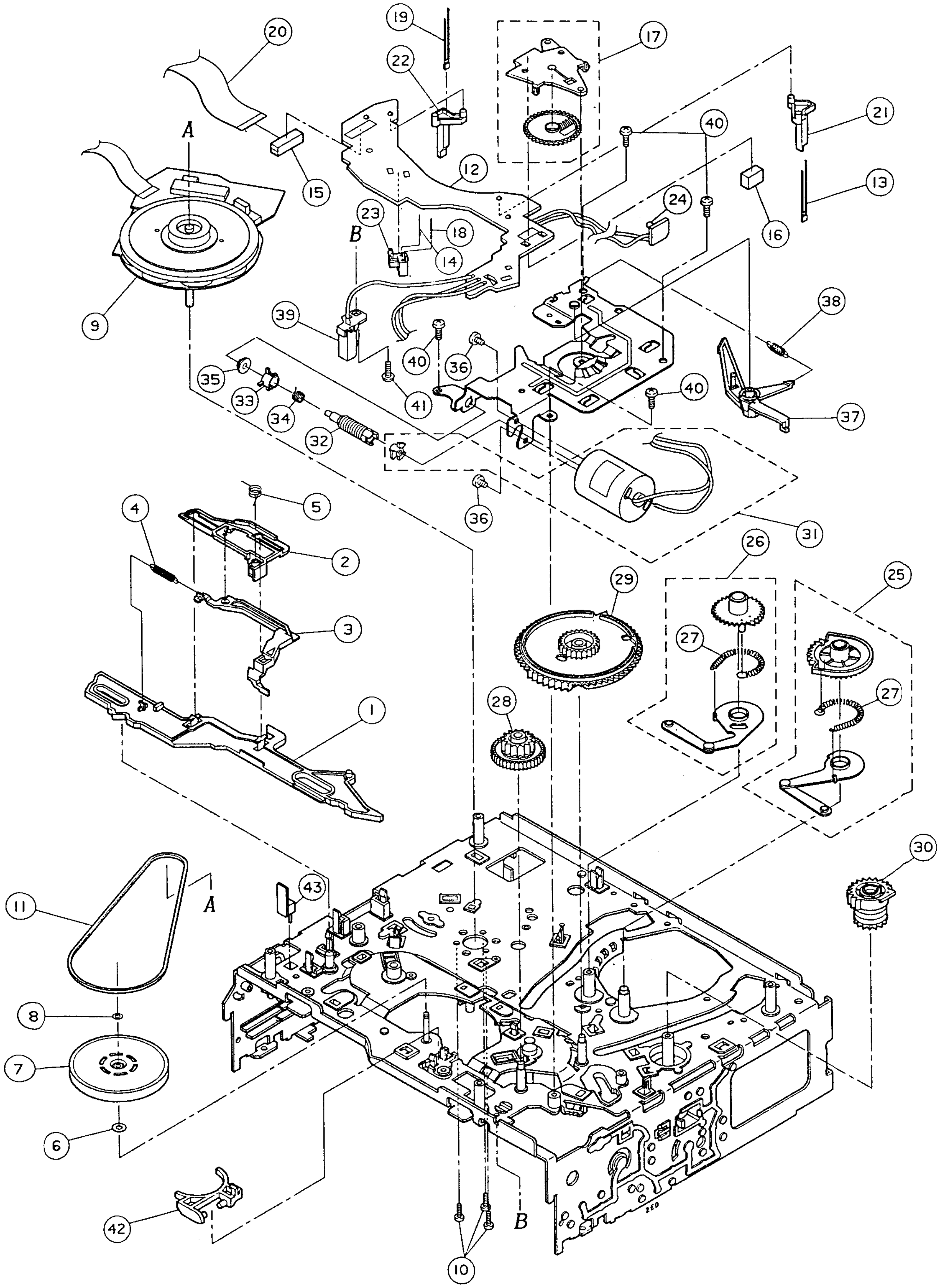
3. MECHA BLOCK (1)

Ref. No.	Part No.	Description
1	ML-387316J	MAIN BRAKE (S) PART
2	ML-387318J	MAIN BRAKE (T) PART
3	ZG-387320J	SP PULL MAIN BRAKE
4	ML-387321J1	REVIEW BRAKE PART
5	ZG-387323J	SP PULL REVIEW BRAKE
6	ML-387423J	ARM LOADING BRAKE
7	ZG-387467J	SP PULL LOADING BRAKE
8	ZW-389814J	PW31X110X050PSL
9	MT-390954J1	DISK (2) PART
10	MI-387294J1	IDLER PART
11	ZG-387438J1	SP PUSH A/C
12	ZS-410851J	PAN30X070STL CMT CP
13	HR-405340J	HEAD COMBO HVMZA1121A
14	ZS-404844J	PAN20X02STL BZN PS1
15	ZS-321298	BID30X08STL CMT
16	ZS-409216J	ST PAN30X07STL CMT C080
17	MZ-407375J1	HOLDER FE HEAD (2) PART
18	MR-407378J1	ROLLER IMPEDANCE (2)
19	ZW-409602J	SLIT W17X035X025PSL
20	HE-390013J	HEAD E HVFME0020A
22	ZS-336714	ST BID30X12STL CMT
23	BL-V1102A050A	TENSION ARM BLK 425EA
24	SZ-407187J2	HOLDER LEVER TENSION (2)
25	ML-390768J4	TENSION BAND PART
26	ZG-387272J	SP PULL TENSION
27	MP-404852J	PINCH ROLLER (2) PART
28	ZS-464703	BID20X04STL CMT
30	ZW-332843	RETAINING RING GRIP 380STL ACP
31	ML-387431J1	SLIDER PINCH PART
32	ML-387277J4	ARM REVIEW PART
33	ZG-387282J	SP TORSION REVIEW
34	ZW-401776J	NUT REVIEW
35	BV-V1102A070A	LEADER S BLK 425EA
36	BV-V1102A080A	LEADER T BLK 425EA
37	VT-387394J1	GUIDE ROLLER D8 PART
38	ZS-374458	6SET20X030SCM PKR FP
39	ML-387428J	SLIDER FRONT LOADING
40	MZ-387335J	GEAR EJECT
41	ML-391745J3	ARM DAMPER
42	ZG-395567J	SP TORSION ARM DAMPER
43	BL-V1102A140A	ARM LOADING BLK 425EA
44	ZG-387417J	SP TORSION LOAD (S)
45	ZG-387418J	SP TORSION LOAD (T)
46	ZG-392831J	SP TORSION JOINT (2)
47	ML-387350J1	ARM LID OPENER
48	BV-V1102A150A	CASSETTE LOAD BLK 425EA
49	ZG-387348J1	SP PLATE HOLDER
50	ZG-387421J	SP TORSION DAMPER (S)
51	ML-387345J	LEVER DAMPER (S)
52	ZG-388290J1	SP TORSION DAMPER (T)
53	ML-387346J1	LEVER DAMPER (T)
54	ML-387344J	LEVER LOCK RELEASE
55	ZG-387420J1	SP TORSION RELEASE
56	ML-387349J2	ARM SHUTTER
57	SE-395554J1	GUIDE FRONT (2)
58	MZ-406134J	PLATE UPPER (2)
59	ZS-358936	ST BID30X06STL CMT
61	ZG-392294J	SP PLATE EARTH
62	ZW-410733J	PW31X050X050PSL
63	MT-407370J	DISK (4) PART
64	BB-V1130A020L	MECHA DECK BLK G20EDG

NOTE:
Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

MECHA BLOCK (2)



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4. MECHA BLOCK (2)

Ref. No.	Part No.	Description
1	ML-387324J1	SLIDER BRAKE PART
2	ML-404944J	SLIDER TRIGGER (2)
3	ML-387402J1	LEVER TRIGGER
4	ZG-387468J	SP PULL SLIDER
5	ZG-387403J	SP TORSION COUPLING
6	ZW-389923J	PW26X060X050PSL
7	MZ-387298J4	DISK CLUTCH PART
8	ZW-387492J	SLIT W21X040X050PSL
9	BM-400682J3	MOTOR DFX-67B3VWB2 [CAPSTAN MOTOR]
10	ZS-365149	PT BID26X06STL CMT
11	MB-387289J	BELT CAPSTAN
12	EA-387496J	PC (#) SENSOR
13	ED-390011J	D LED GL451 INFRARED [D1]
14	ED-390012J	D LED GL4800 INFRARED [D2]
15	EJ-387497J	SOCKET HOUSING 5062-30-10-13 [PS1]
16	EJ-381837J	SOCKET 174074-5 5P [P1]
17	ES-387465J	SW MODE SELECT MMS00070ZLBO [SW1]
18	ET-390010J	TR PHOTO PT4800 [TR2]
19	ET-390009J	TR PHOTO PT493F [TR4]
20	EW-389313J	CORD FFC P1.25 L=120 13P [WP1]
21	MZ-387430J	HOLDER D-LED
22	MZ-387445J	HOLDER S SENSOR
23	MZ-387446J	HOLDER PHOTO SENSOR
24	ET-361490	TR PHOTO PN268 [TR1]
25	MZ-V1102A090A	GEAR TOGGLE (S) BLK 425EA
26	MZ-V1102A100A	GEAR TOGGLE (T) BLK 425EA
27	ZG-387413J1	SP PULL TOGGLE
28	MZ-387332J	GEAR WORM WHEEL
29	MZ-387331J2	GEAR CAM SLIDER
30	MZ-387333J1	GEAR FRONT LOADING
31	BM-387503J	MOTOR PART [LOADING MOTOR]
32	MZ-409537J	GEAR WORM (2) PART
33	MR-391968J	PULLEY TRIGGER (2)
34	ZG-387443J	SP TRIGGER
35	MR-387406J	HOLDER THRUST WORM
36	ZS-425981	BID30X03STL CMT
37	BL-387458J2	CAPSTAN BRAKE PART
38	ZG-387502J	SP PULL CAPSTAN BRAKE
39	ES-373099	SW LEAF MTS10110MPC1
40	ZS-389950J	PT BID26X10STL CMT
41	ZS-358936	ST BID30X06STL CMT
42	ML-387311J2	ARM COUPLING
43	ES-408470J	SW MICRO HXW0593-01-100 01-1 [S-SW]

NOTE:
Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

5. P.C BOARD BLK

Ref. No.	Part No.	Description
1-A	BA-V1168A600A	PC (#) MAIN (PAL) BLK G40EA [EA]
1-B	BA-V1168A600B	PC (#) MAIN (PAL) BLK G40EDG [EDG]
1-C	BA-V1168Q600C	FRPC (#) MAIN (PAL) BLK G40EK/FR [G40EK,G43EK]
1-D	BA-V1168A600D	PC (#) MAIN (PAL) BLK G40EM [EM]
1-E	BA-V1168Q600E	PC (#) MAIN (PAL) BLK G40EO [EO]
1-F	BA-V1168A600F	PC (#) MAIN (PAL) BLK G43EOH [EOH]
1-G	BA-V1168Q600H	FRPC (#) MAIN (PAL) BLK G44EOH-V/FR [EOH-V]
1-H	BA-V1168Q600J	FRPC (#) MAIN (PAL) BLK G44EK/FR [G44EK]
1-J	BA-V1168Q600G	FRPC (#) MAIN (PAL) BLK G45EOG-V/FR [EOG-V]
2-A	BA-V1166A610C	PC PRE AMP PAL BLK G40EA [EXCEPT EM]
2-B	BA-V1166A610D	PC PRE AMP PAL BLK G40EM [EM]
3-A	BA-V1164A640A	PC (#) OPERATION (B) BLK G40EA [EA]
3-B	BA-V1164A640B	PC (#) OPERATION (B) BLK G40EDG [EDG]
3-C	BA-V1164Q640C	FRPC (#) OPERATION (B) BLK G40EK/FR [G40EK]
3-D	BA-V1164Q640M	FRPC (#) OPERATION (B) BLK G43EK/FR [G43EK]
3-E	BA-V1164Q640K	FRPC (#) OPERATION (B) BLK G44EK/FR [G44EK]
3-F	BA-V1164A640D	PC (#) OPERATION (B) BLK G40EM [EM]
3-G	BA-V1164Q640E	PC (#) OPERATION (B) BLK G40EO [EO]
3-H	BA-V1164A640G	PC (#) OPERATION (B) BLK G43EOH [EOH]
3-J	BA-V1164Q640J	FRPC (#) OPERATION (B) BLK G44EOH-V/FR [EOH-V]
3-K	BA-V1164Q640H	FRPC (#) OPERATION (B) BLK G45EOG-V/FR [EOG-V]
4-A	BA-V1164A500A	PC POWER BLK G30EA [EA]
4-B	BA-V1164A500C	PC POWER BLK G20EDG [EDG]
4-C	BA-V1164Q500B	FR PC POWER BLK G20EK/FR [EK]
4-D	BA-V1130A510A	PC (#) POWER EM BLK F220EM [EM]
4-E	BA-V1166A500A	PC (#) POWER EO BLK G20EO [EO]
4-F	BA-V1166A500C	PC (#) POWER EO BLK G20EOH [EOH]
4-G	BA-V1161A500C	PC (#) POWER EGN BLK G22SEG [EOH-V]
4-H	BA-V1161Q500B	FR PC (#) POWER EGN BLK G25EOG-V/FR [EOG-V]

PC (#) MAIN BLK CONSISTS OF FOLLOWINGP.C BOARDS.
- MAIN (A) P.C BOARD
- MAIN (B) P.C BOARD

PC (#) OPERATION BLK CONSISTS OF FOLLOWING P.C BOARDS.
- OPERATION P.C BOARD
- PIN JACK P.C BOARD

PC (#) POWER EO/EOH BLK CONSISTS OF FOLLOWING P.C BOARDS.
- POWER SUPPLY P.C BOARD
- DIODE P.C BOARD

PC (#) POWER EM BLK CONSISTS OF FOLLOWING P.C BOARDS.
- POWER SUPPLY (1) P.C BOARD
- POWER SUPPLY (2) P.C BOARD
- DIODE P.C BOARD

PC (#) POWER EGN BLK CONSISTS OF FOLLOWING P.C BOARDS.
- POWER SUPPLY (1) P.C BOARD
- POWER SUPPLY (2) P.C BOARD

6. MAIN (A) P.C BOARD

Ref. No.	Part No.	Description
C369	*EC-391843J	C DOUBLE FYD0H223Z 5.5DC
D1	ED-307572	D SILICON H 1SS131
D2	ED-307572	D SILICON H 1SS131
D3	ED-307572	D SILICON H 1SS131 [EXCEPT EK]
D4	ED-307572	D SILICON H 1SS131 [EXCEPT EK]
D6	ED-403731J	D ZENER H UTZJ8.2C [EOH,EOG-V,EOH-V]
D7	ED-307572	D SILICON H 1SS131 [EOH,EOG-V,EOH-V]
D8	ED-387919J	D ZENER H HZS6A1L
D9	ED-307572	D SILICON H 1SS131 [EO,EOG-V]
D10	ED-307572	D SILICON H 1SS131 [EO,EOG-V]
D12	ED-405603J	D ZENER H MTZJ10B T26 [EO,EOH,EOG-V,EOH-V]
D13	ED-405604J	D ZENER H MTZJ4.3C T26 [EO,EOH,EOG-V,EOH-V]
D50	ED-307572	D SILICON H 1SS131 [EOH,EOG-V,EOH-V]
D101	ED-403725J	D ZENER H UTZJ12C [EK]
D201	ED-307572	D SILICON H 1SS131
D202	ED-307572	D SILICON H 1SS131
D203	ED-307572	D SILICON H 1SS131
D204	ED-397233J	D ZENER H HZS5C3
D205	ED-403267J	D ZENER H MTZJ3.3B T26
D206	ED-307572	D SILICON H 1SS131 [EOG-V]
D207	ED-307572	D SILICON H 1SS131 [EOG-V]
D208	ED-307572	D SILICON H 1SS131
D209	ED-307572	D SILICON H 1SS131
D210	ED-403726J	D ZENER H UTZJ30B [EOG-V]
D211	ED-403730J	D ZENER H UTZJ6.2A [EOG-V]
D212	ED-511907	D SILICON 1N4002 100/1.0A
D213	ED-511907	D SILICON 1N4002 100/1.0A
D301	ED-307572	D SILICON H 1SS131
D302	ED-307572	D SILICON H 1SS131
D303	ED-404086J	D ZENER H UTZJ7.5C
D304	ED-403724J	D ZENER H UTZJ10A
D305	ED-307572	D SILICON H 1SS131
D306	ED-307572	D SILICON H 1SS131
D307	ED-307572	D SILICON H 1SS131
D308	ED-307572	D SILICON H 1SS131
D309	ED-307572	D SILICON H 1SS131
D401	ED-307572	D SILICON H 1SS131
D402	ED-307572	D SILICON H 1SS131
D403	ED-307572	D SILICON H 1SS131 [EM]
D405	ED-307572	D SILICON H 1SS131
D406	ED-366443	D SILICON H MA700FA5 F10
D408	ED-307572	D SILICON H 1SS131
D412	ED-403729J	D ZENER H UTZJ5.6C
D501	ED-307572	D SILICON H 1SS131 [EXCEPT EA,EK]
D502	ED-307572	D SILICON H 1SS131
D503	ED-307572	D SILICON H 1SS131
D504	ED-307572	D SILICON H 1SS131
D505	ED-307572	D SILICON H 1SS131
D506	ED-307572	D SILICON H 1SS131
D507	ED-307572	D SILICON H 1SS131
D508	ED-307572	D SILICON H 1SS131 [EXCEPT EA,EK]
D509	ED-307572	D SILICON H 1SS131
DL500	EH-416491J	DL EFDJLA13A
DL501	EH-394838J	DL ADL-FN1344Q [EM]
FL1	EH-394684J	FILTER EMI ZBF503D-00TA T05 [EOG-V]
FR201	*ER-400959J	R FUSE V T05 ERD2FCV 1/4W1200G
FR202	*ER-404093J	R FUSE V T05 RF25SCVTP1/4WR56K [EO,EOH,EOG-V,EOH-V]
FR350	*ER-400729J	R FUSE V T05 RF25SCVTP1/4WR47K
FR501	*ER-404093J	R FUSE V T05 RF25SCVTP1/4WR56K

Ref. No.	Part No.	Description
IC1	EI-389622J	IC L5631
IC101	EI-310036	IC TC4066BP
IC201	EI-400756J	IC NJM4558L-B
IC301	EI-414822J1	IC MN675201A-XDS1 QBXSYP2
IC302	EI-353421	IC BA6229
IC303	EI-373980	IC BA15218N
IC400	EI-403234J1	IC LA7391A
IC401	EI-394856J	IC LC8992
IC402	EI-373981J1	IC BA10393N
IC403	EI-356457	IC BU4013B
L1-A	EO-373260	COIL FIX 1 LAP02 F05 1R0K [EA,EDG]
L1-B	EO-390998J	COIL FIX 1 LAP02 F05 R68K [EK]
L101	EO-345881	COIL FIX 1 EL0606SKI 101J
L103	EO-356722	COIL FIX 1 LAP02 F05 6R8K
L301	EO-381196J	COIL FIX 1 EL0405SKI 470K
L302	EO-345881	COIL FIX 1 EL0606SKI 101J
L402	EO-357508	COIL FIX 1 LAP02 F05 151K
L403	EO-381192J	COIL FIX 1 EL0405SKI 270K
L404	EO-345880	COIL FIX 1 EL0606SKI 820J
L405	EO-354600	COIL FIX 1 LAP02 F05 101K
L406	EO-354600	COIL FIX 1 LAP02 F05 101K
L410	EO-345874	COIL FIX 1 EL0606SKI 330J
L450	EO-373260	COIL FIX 1 LAP02 F05 1R0K [EOG-V]
L470	EO-356722	COIL FIX 1 LAP02 F05 6R8K
L472	EO-345880	COIL FIX 1 EL0606SKI 820J
L474	EO-388161J	COIL FIX 1 EL0405SKI 560K
L480	EO-403937J	COIL FIX 1 EL0405RA T05 4R7J [EOG-V]
L500	EO-345880	COIL FIX 1 EL0606SKI 820J
L501	EO-353900	COIL FIX 1 LAP02 F05 150K
L502	EO-345880	COIL FIX 1 EL0606SKI 820J [EM]
L503	EO-353900	COIL FIX 1 LAP02 F05 150K [EM]
L504	EO-353900	COIL FIX 1 LAP02 F05 150K [EM]
L505	EO-345880	COIL FIX 1 EL0606SKI 820J
L507	EO-392817J	COIL FIX 1 EL0405SKI 1R2K
L508	EO-403937J	COIL FIX 1 EL0405RA T05 4R7J
L509	EO-345880	COIL FIX 1 EL0606SKI 820J
L510	EO-403270J	COIL FIX 1 EL0405RA T05 101J
L511	EO-381195J	COIL FIX 1 EL0405SKI 331K
L512	EO-381197J	COIL FIX 1 EL0405SKI 471K
L570	EO-345880	COIL FIX 1 EL0606SKI 820J
L590	EO-387802J	COIL FIX 1 EL0405SKI 330K [EM]
MD1-A	BV-387610J1	RF CONVERTER YAA21-0809G EA [EA]
MD1-B	BV-403408J	RF CONVERTER MDLK6E753A EDG [EDG]
MD1-C	BV-403410J	RF CONVERTER MDLK6B733A EK [EK]
MD1-D	BV-387611J1	RF CONVERTER YAA21-0808G EV [EM]
MD1-E	BV-403409J	RF CONVERTER MDLK6D755A EO [EO,EOH,EOG-V,EOH-V]
P303	EJ-388345J	SOCKET HLEM13S-1 13P
P304	EJ-388346J	SOCKET HLEM15S-1 15P
P400	EJ-388345J	SOCKET HLEM13S-1 13P
P401	EJ-403407J	SOCKET HLEM18S-1 18P
PJ101	EJ-387614J	PIN J T6353-ABCB YL BK 4P [EA,EDG,EM]
PJ102	EJ-387613J	SOCKET M1812 21P [EXCEPT EA,EDG,EM]
R214	*ER-403405J	R OMF H S12 FS 1W R75J
TR1	ET-353899	TR 2SA1317 S,T,U
TR2	ET-414816J	TR 2SC2668 Y T05
TR3	ET-353899	TR 2SA1317 S,T,U
TR4	ET-353899	TR 2SA1317 S,T,U [EXCEPT EK]
TR5	ET-353899	TR 2SA1317 S,T,U [EXCEPT EK]
TR7	ET-353899	TR 2SA1317 S,T,U [EXCEPT EK]
TR8	ET-354414	TR DTC144ES [EXCEPT EK]
TR9	ET-354414	TR DTC144ES [EXCEPT EK]

Ref. No.	Part No.	Description
TR11	ET-353899	TR 2SA1317 S,T,U
TR12	ET-397160J	TR 2SC3330 R,S,T,U,V
TR13	ET-353899	TR 2SA1317 S,T,U [EXCEPT EOH,EOG-V,EOH-V]
TR14	ET-370310	TR DTC144TS [EOH,EOG-V,EOH-V]
TR15	ET-353897	TR DTC114ES
TR16	ET-397160J	TR 2SC3330 R,S,T,U,V [EOH,EOG-V,EOH-V]
TR17	ET-397160J	TR 2SC3330 R,S,T,U,V
TR18	ET-397160J	TR 2SC3330 R,S,T,U,V
TR19	ET-354414	TR DTC144ES [EXCEPT EDG]
TR20	ET-405622J	TR 2SD2061 E,F [EO,EOH,EOG-V,EOH-V]
TR101	ET-354414	TR DTC144ES
TR102	ET-356336	TR DTA114ES
TR103	ET-354414	TR DTC144ES
TR104	ET-353899	TR 2SA1317 S,T,U
TR105	ET-353899	TR 2SA1317 S,T,U
TR107	ET-397160J	TR 2SC3330 R,S,T,U,V
TR108	ET-356336	TR DTA114ES [EXCEPT EA,EDG,EM]
TR109	ET-397160J	TR 2SC3330 R,S,T,U,V
TR201	ET-366168	TR 2SD1292 Q,R [EOG-V]
TR202	ET-356336	TR DTA114ES
TR203	ET-397160J	TR 2SC3330 R,S,T,U,V
TR205	ET-388338J	TR 2SB1425 S,E
TR209	ET-354414	TR DTC144ES [EOG-V]
TR210	ET-405622J	TR 2SD2061 E,F
TR211	ET-356336	TR DTA114ES [EOG-V]
TR301	ET-354414	TR DTC144ES
TR302	ET-397160J	TR 2SC3330 R,S,T,U,V
TR303	ET-363953	TR DTA114TS [EM]
TR304	ET-354415	TR DTA144ES
TR305	ET-354414	TR DTC144ES
TR306	ET-354414	TR DTC144ES
TR307	ET-373985	TR DTA144TS
TR308	ET-373985	TR DTA144TS
TR309	ET-373985	TR DTA144TS
TR310	ET-354414	TR DTC144ES
TR313	ET-354414	TR DTC144ES
TR401	ET-356336	TR DTA114ES
TR402	ET-354414	TR DTC144ES
TR404	ET-354364	TR DTC143TS
TR406	ET-397160J	TR 2SC3330 R,S,T,U,V
TR407	ET-353899	TR 2SA1317 S,T,U
TR408	ET-354414	TR DTC144ES
TR409	ET-360399	TR DTC114TS
TR410	ET-354414	TR DTC144ES
TR411	ET-360399	TR DTC114TS
TR413	ET-354415	TR DTA144ES
TR414	ET-388338J	TR 2SB1425 S,E
TR415	ET-353899	TR 2SA1317 S,T,U
TR417	ET-360399	TR DTC114TS
TR421	ET-364040	TR UN421D
TR423	ET-356336	TR DTA114ES
TR424	ET-388338J	TR 2SB1425 S,E
TR425	ET-354414	TR DTC144ES [EM]
TR470	ET-353899	TR 2SA1317 S,T,U
TR471	ET-353899	TR 2SA1317 S,T,U
TR501	ET-353897	TR DTC114ES
TR502	ET-360646	TR DTA143ES [EM]
TR503	ET-397160J	TR 2SC3330 R,S,T,U,V
TR504	ET-397160J	TR 2SC3330 R,S,T,U,V [EM]
TR505	ET-397160J	TR 2SC3330 R,S,T,U,V [EM]
TR506	ET-397160J	TR 2SC3330 R,S,T,U,V
TR507	ET-397160J	TR 2SC3330 R,S,T,U,V
TR508	ET-356336	TR DTA114ES
TR509	ET-397160J	TR 2SC3330 R,S,T,U,V
TR510	ET-397160J	TR 2SC3330 R,S,T,U,V
TR511	ET-397160J	TR 2SC3330 R,S,T,U,V
TR512	ET-397160J	TR 2SC3330 R,S,T,U,V
TR513	ET-356336	TR DTA114ES [EXCEPT EA,EK]
TR515	ET-397160J	TR 2SC3330 R,S,T,U,V
TR570	ET-397160J	TR 2SC3330 R,S,T,U,V
TR571	ET-397160J	TR 2SC3330 R,S,T,U,V
TR572	ET-354414	TR DTC144ES
TR573	ET-354414	TR DTC144ES
VR301	EV-397066J	R S-FIX H T05EVNDXAA03 0.1W333
VR401	EV-389476J	R S-FIX H T05EVNDXAA03 0.1W103
VR402	EV-389489J	R S-FIX H T05EVNDXAA03 0.1W472
VR403	EV-389482J	R S-FIX H T05EVNDXAA03 0.1W682
VR404	EV-397066J	R S-FIX H T05EVNDXAA03 0.1W333
WF201	EW-416798J	CORD QX MA-POW L=215 12P
X301	EI-389640N	OSC X'TAL HC-49/U 8000KHZ
X500	EI-381632J	OSC X'TAL 86686 4.433619MHZ
IF1-A	BV-403236J1	VIF UNIT KX EA [EA]
IF1-B	BV-412399J	VIF UNIT KX-38.9 EDG [EDG]
IF1-C	BV-403238J1	VIF UNIT KX EK [EK]
IF1-D	BV-403239J1	VIF UNIT KX EM [EM]
IF1-E	BV-403241J1	VIF UNIT KX EOG [EO]
IF1-F	BV-403240J1	VIF UNIT KX EOH [EOH,EOH-V]
IF1-G	BV-416729J	VIF UNIT KX-TEK EOG [EOG-V]
TU1-A	EE-408417J	TV TUNER VTSS6AZV EA [EA]
TU1-B	EE-387603J1	TV TUNER TERE1-019B EO [EDG]
TU1-C	EE-387607J1	TV TUNER TERB1-008B EK [EK]
TU1-D	EE-405638J	TV TUNER VTSS6CZ EM [EM]
TU1-E	EE-387604J3	TV TUNER TERE1-007D EOG [EO]
TU1-F	EE-412395J	TV TUNER ENV-578C9F1 EOH [EOH,EOH-V]
TU1-G	EE-416524J	TV TUNER TEKE4-034 EOG [EOG-V]
1-A	SP-388307J	PANEL REAR JACK EA [EA,EM]
1-B	SP-395563J	PANEL REAR JACK EDG (2) [EDG]
1-C	SP-387357J	PANEL REAR JACK EK [EK,EO,EOH,EOH-V]
1-D	SP-388305J	PANEL REAR JACK EOG [EOG-V]

7. MAIN (B) P.C BOARD

Ref. No.	Part No.	Description
D601	ED-307572	D SILICON H 1SS131
D603	ED-307572	D SILICON H 1SS131 [EXCEPT EA,EK]
D801	ED-307572	D SILICON H 1SS131
D802	ED-386226J	D SCHOTTKY RB100AT-32T26 40/1 [EOG-V]
D901	ED-307572	D SILICON H 1SS131 [EXCEPT G40EK,G43EK]
D902	ED-307572	D SILICON H 1SS131 [EXCEPT G40EK,G43EK]
FL701	EH-366894	FILTER CE SFE-4.16MB 4.16MHZ [EDG,EM,EOG-V]
FL801	EO-408441J	COIL OSC 1 125-8021-41 70.0KHZ
IC601	EI-405722J	IC UPD6450CX-515
IC602	EI-403469J	IC MM1068XS
IC701	EI-366892	IC BA7025L [EDG,EM,EOG-V]
IC702	EI-200573	IC TC4053BP [EM]
IC801	EI-388360J	IC BA7765AS
IC902	EI-310036	IC TC4066BP [EXCEPT G40EK,G43EK]
L601	EO-345881	COIL FIX 1 EL0606SKI 101J
L602	EO-345876	COIL FIX 1 EL0606SKI 470J
L603	EO-351866	COIL FIX 1 LAP02 F05 330K [EXCEPT EA,EK]
L604	EO-351866	COIL FIX 1 LAP02 F05 330K
L605	EO-345881	COIL FIX 1 EL0606SKI 101J
L701	EO-345881	COIL FIX 1 EL0606SKI 101J [EDG,EM,EOG-V]
L702	EO-345881	COIL FIX 1 EL0606SKI 101J [EM]
L703	EO-368129	COIL FIX 1 TL-8 153J [EDG,EM,EOG-V]
L801	EO-390717J	COIL FIX 1 LHL06TB T05 103J
L802	EO-390716J	COIL FIX 1 LHL06TB T05 272J
L901	EO-345881	COIL FIX 1 EL0606SKI 101J [EXCEPT G40EK,G43EK]
TR601	ET-353899	TR 2SA1317 S,T,U
TR602	ET-354414	TR DTC144ES
TR603	ET-397160J	TR 2SC3330 R,S,T,U,V
TR604	ET-397160J	TR 2SC3330 R,S,T,U,V [EXCEPT EA,EK]
TR605	ET-356336	TR DTA114ES [EXCEPT EA,EK]
TR606	ET-356336	TR DTA114ES [EXCEPT EA,EK]
TR607	ET-353899	TR 2SA1317 S,T,U
TR608	ET-353899	TR 2SA1317 S,T,U
TR609	ET-354414	TR DTC144ES [EXCEPT EA,EK]
TR701	ET-397160J	TR 2SC3330 R,S,T,U,V [EDG,EM,EOG-V]
TR702	ET-397160J	TR 2SC3330 R,S,T,U,V [EDG,EM,EOG-V]
TR751	ET-397160J	TR 2SC3330 R,S,T,U,V [EM]
TR752	ET-397160J	TR 2SC3330 R,S,T,U,V [EM]
TR753	ET-397160J	TR 2SC3330 R,S,T,U,V [EM]
TR754	ET-397160J	TR 2SC3330 R,S,T,U,V [EM]
TR801	ET-397160J	TR 2SC3330 R,S,T,U,V
TR803	ET-354414	TR DTC144ES [EM]
TR901	ET-354414	TR DTC144ES [EXCEPT G40EK,G43EK]
TR902	ET-354414	TR DTC144ES [EXCEPT G40EK,G43EK]
TR903	ET-397160J	TR 2SC3330 R,S,T,U,V [EXCEPT G40EK,G43EK]
TR904	ET-353899	TR 2SA1317 S,T,U [EXCEPT G40EK,G43EK]
VR801	EV-403967J	R S-FIX V T05EVNDCAA03 0.1W332
VR802	EV-405263J	R S-FIX V T05EVNDCAA03 0.1W104
X601	EI-389974J	OSC X'TAL HC-49/U 17.734475MHZ
X602	EI-403467J	OSC CE CSB500F40 15.680KHZ

8. PRE AMP P.C BOARD

Ref. No.	Part No.	Description
D1	ED-307572	D SILICON H 1SS131
D2	ED-307572	D SILICON H 1SS131
D3	ED-307572	D SILICON H 1SS131
D4	ED-307572	D SILICON H 1SS131
IC1	EI-414860J	IC BA7279S
L1	EO-354600	COIL FIX 1 LAP02 F05 101K
L2	EO-353901	COIL FIX 1 LAP02 F05 560K
L4	EO-360555	COIL FIX 1 LAP02 F05 180K
L5	EO-353900	COIL FIX 1 LAP02 F05 150K
L6	EO-381193J	COIL FIX 1 EL0405SKI 271K
L7	EO-351869	COIL FIX 1 LAP02 F05 820K
L9	EO-414830J	COIL FIX 1 LAP02 T26 220J
L12	EO-414833J	COIL FIX 1 LAP02 T26 8R2J
L13	EO-381195J	COIL FIX 1 EL0405SKI 331K
L14	EO-414829J	COIL FIX 1 LAP02 T26 181J
L15	EO-414831J	COIL FIX 1 LAP02 T26 680J
L16	EO-354600	COIL FIX 1 LAP02 F05 101K
L30	EO-351869	COIL FIX 1 LAP02 F05 820K
P3	EJ-403407J	SOCKET HLEM18S-1 18P
TH1	EX-405691J	THERMISTOR NTH5D332KA
TR1	ET-353899	TR 2SA1317 S,T,U
TR2	ET-397160J	TR 2SC3330 R,S,T,U,V
TR3	ET-360399	TR DTC114TS [EM]
TR4	ET-360399	TR DTC114TS
TR5	ET-364040	TR UN421D
TR7	ET-397160J	TR 2SC3330 R,S,T,U,V
TR8	ET-397160J	TR 2SC3330 R,S,T,U,V
TR9	ET-397160J	TR 2SC3330 R,S,T,U,V
TR10	ET-353897	TR DTC114ES
TR11	ET-353899	TR 2SA1317 S,T,U
TR12	ET-353899	TR 2SA1317 S,T,U
TR13	ET-364040	TR UN421D
TR14	ET-397160J	TR 2SC3330 R,S,T,U,V
TR16	ET-354414	TR DTC144ES
TR17	ET-364040	TR UN421D
TR18	ET-353897	TR DTC114ES
TR19	ET-354414	TR DTC144ES
TR21	ET-397160J	TR 2SC3330 R,S,T,U,V
TR22	ET-360399	TR DTC114TS
TR23	ET-354414	TR DTC144ES
VR1	EV-403988J	R S-FIX V T05EVNDCAA03 0.1W102
VR2	EV-403988J	R S-FIX V T05EVNDCAA03 0.1W102
VR3	EV-405248J	R S-FIX V T05EVNDCAA03 0.1W471
VR4	EV-405248J	R S-FIX V T05EVNDCAA03 0.1W471
1	EW-414862J	CORD FFC BD P1.25 L=230 18P

9. OPERATION P.C BOARD

Ref. No.	Part No.	Description
D1	ED-307572	D SILICON H 1SS131 [EDG,EM]
D2	ED-307572	D SILICON H 1SS131 [EK,EM,EOG-V]
D3	ED-307572	D SILICON H 1SS131 [EA,EDG]
D4	ED-307572	D SILICON H 1SS131 [EO]
D5	ED-307572	D SILICON H 1SS131 [EM]
D7	ED-307572	D SILICON H 1SS131
D9	ED-307572	D SILICON H 1SS131 [G43EK,G44EK]
D10	ED-307572	D SILICON H 1SS131 [EOG-V,EOH-V]
D11	ED-307572	D SILICON H 1SS131 [EOG-V,EOH-V]
D12	ED-403279J	D ZENER H UTZJ9.1B
D13	ED-403278J	D ZENER H UTZJ7.5B
D14	ED-307572	D SILICON H 1SS131
D15	ED-307572	D SILICON H 1SS131
D16	ED-307572	D SILICON H 1SS131
D17	ED-401099J	D SCHOTTKY MA719 T26 40/0.5A [EOG-V]
D18	ED-307572	D SILICON H 1SS131
D19	ED-307572	D SILICON H 1SS131
D20	ED-307572	D SILICON H 1SS131
D21	ED-307572	D SILICON H 1SS131
D22	ED-307572	D SILICON H 1SS131
FL1	EM-401077J	IND FL FV496G CHARACTER
IB1	EH-403945J	COMP R RGLE9X 103J
IB2	EH-383083J	COMP R RGLE3X 103J
IB3	EH-383056J	COMP R RGLE4X 103J [G43EK,G44EK,EOG-V,EOH-V]
IC1-A	EI-414817J	IC UPD75217CW-185 QBXOPP1 [EXCEPT EOG-V,EOH-V]
IC1-B	EI-416736J	IC UPD75217CW-194 QBXOPG1 [EOG-V]
IC1-C	EI-414818J	IC UPD75217CW-186 QBXOPD1 [EOH-V]
IC2	EI-408393J	IC ST24C01B1
IC3	EI-373955	IC S-8053ALR
L1	EO-353587	COIL FIX 1 LAP02 F05 220K
L2	EO-353587	COIL FIX 1 LAP02 F05 220K
PH1	ET-411995J	DETECTOR GP1U581X
P2	EJ-397357J	SOCKET HLEM13R-1 13P
P3	EJ-414768J	SOCKET HLEM15R-1 15P
SW1	ES-408405J	SW TACT EVQ 235 09K T05
SW2	ES-349474	SW TACT SKHHAM004A
SW3	ES-349474	SW TACT SKHHAM004A
SW4	ES-349474	SW TACT SKHHAM004A
SW5	ES-349474	SW TACT SKHHAM004A
SW6	ES-349474	SW TACT SKHHAM004A
SW7	ES-349474	SW TACT SKHHAM004A
SW8	ES-349474	SW TACT SKHHAM004A
SW9	ES-349474	SW TACT SKHHAM004A
SW10	ES-349474	SW TACT SKHHAM004A
TR1	ET-354414	TR DTC144ES
X1	EI-367882J1	OSC CE FCR4.19MC3 4.190MHZ
X2	EI-368825M	OSC X'TAL C-002RX 32.768KHZ
1	EW-414866J	CORD FFC BD P1.25 L=130 13P
2	EW-414864J	CORD FFC BD P1.25 L=110 15P

10. PIN JACK P.C BOARD (EXCEPT G40EK,G43EK)

Ref. No.	Part No.	Description
D23	ED-307572	D SILICON H 1SS131
D24	ED-307572	D SILICON H 1SS131
PJ1	EJ-387622J	PIN J JPJ5022-01-010 1P
PJ2	EJ-387623J	PIN J JPJ5022-01-040 1P

11. VIF UNIT (EXCEPT EDG)

Ref. No.	Part No.	Description
CF1-A	EH-730625J	FILTER CE SAF38.9MZW70Z [EXCEPT EA,EK]
CF1-B	EH-714626	FILTER SAW SAF36.9MZ70Z [EA]
CF1-C	EH-714628	FILTER SAW SAF39.5MZ70Z [EK]
CF2-A	EH-373920	FILTER CE SFE5.5MB [EXCEPT EK]
CF2-B	EH-373921	FILTER CE SFE6.0MB [EK]
CF3-A	EH-368948	FILTER CE TPS5.5MW 5.5000MHZ [EXCEPT EK,EM]
CF3-B	EH-373919	FILTER CE TPS6.0MB [EK]
CF3-C	EH-729986J	FILTER CE TPS5.5MB2 [EM]
IC1	EI-368809	IC M51496P
L1	EO-387800J	COIL FIX 1 EL0405SKI 2R7K
L3-A	EH-733514J	COIL SIF DET 6F16437A1 [EXCEPT EK]
L3-B	EO-732831J	COIL SIF DET 6F16437A2 [EK]
L4-A	EO-732832J	COIL AFT 6F16435A1 [EXCEPT EA]
L4-B	EH-733515J	COIL AFT 6F16436A2 [EA]
L5-A	EO-732833J	COIL TANK 7KL 6F16436A1 [EXCEPT EA]
L5-B	EH-733516J	COIL TANK 6F16441A1 [EA]
L6-A	EO-387799J	COIL FIX 1 EL0405SKI 18OK [EXCEPT EK]
L6-B	EO-387798J	COIL FIX 1 EL0405SKI 15OK [EK]
L7-A	EO-387799J	COIL FIX 1 EL0405SKI 18OK [EXCEPT EK]
L7-B	EO-387798J	COIL FIX 1 EL0405SKI 15OK [EK]
L8	EO-387802J	COIL FIX 1 EL0405SKI 33OK
L51	EO-725964J	COIL TRAP 6F16222A1 [EO,EOG-V]
L52	EO-725965J	COIL TRAP 6F16223A1 [EO,EOG-V]
Q1	ET-725820J	TR CHIP 2SC2735J
Q2	ET-713614	TR CHIP 2SA1235 E,F
Q51	ET-724885J	TR CHIP RT1N141C [EO,EOG-V]
Q52	ET-724885J	TR CHIP RT1N141C [EO,EOG-V]
VR2	EV-396023J	R S-FIX H T05EVNDXAA03 0.1W222
VR51	EV-389479J	R S-FIX H T05EVNDXAA03 0.1W223
VR52	EV-389479J	R S-FIX H T05EVNDXAA03 0.1W223 [EO,EOG-V]

12. VIF UNIT (EDG)

Ref. No.	Part No.	Description
CF1	EH-394874J	FILTER CE SAF38.9MZA70Z
CF2	EH-376338	FILTER CE TPS6.5MB
CF3	EH-368948	FILTER CE TPS5.5MW 5.5000MHZ
CF4	EH-373918	FILTER CE TPS5.5MB
CF51	EH-412432J	FILTER CE SFSH6.5MDB 6.500MHZ
CF52	EH-368827	FILTER CE SFS5.5MD 5.500MHZ
CF53	EH-373921	FILTER CE SFE6.0MB
IC1	EI-368809	IC M51496P
L1	EO-387782J	COIL FIX 1 EL0405SKI 2R2K
L2	EO-732831J	COIL SIF DET 6F16437A2
L3	EO-732832J	COIL AFT 6F16435A1
L4	EO-732833J	COIL TANK 7KL 6F16436A1
L5	EO-397238J	COIL FIX 1 EL0405SKI 6R8K
L6	EO-387798J	COIL FIX 1 EL0405SKI 150K
L51	EO-396361J	COIL FIX 1 EL0405SKI 8R2K
L52	EO-387803J	COIL FIX 1 EL0405SKI 221K
Q1	ET-725820J	TR CHIP 2SC2735J
Q2	ET-713614	TR CHIP 2SA1235 E,F
Q3	ET-370819	TR.CHIP 2SC3052
Q4	ET-713614	TR CHIP 2SA1235 E,F
Q51	ET-370819	TR.CHIP 2SC3052
Q52	ET-370819	TR.CHIP 2SC3052
VR1	EV-389479J	R S-FIX H T05EVNDXAA03 0.1W223
VR2	EV-396023J	R S-FIX H T05EVNDXAA03 0.1W222
X51	EI-368829	OSC CE CSB512P

13. POWER SUPPLY P.C BOARD (EXCEPT EM,EOG-V,EOH-V)

Ref. No.	Part No.	Description
C1	EC-414869J	C EC V CUT GXB12 222M 25.0DC
C2	EC-411667J	C EC V CUT GXB16 472M 16.0DC
C3	EC-414870J	C EC V CUT GXB16 222M 35.0DC
C4	EC-414878J	C EC V CUT LLA 470M 100.0DC
C5	EC-414878J	C EC V CUT LLA 470M 100.0DC
D1	*ED-511907	D SILICON 1N4002 100/1.0A
D2	*ED-511907	D SILICON 1N4002 100/1.0A
D3	*ED-511907	D SILICON 1N4002 100/1.0A
D4	*ED-511907	D SILICON 1N4002 100/1.0A
D5	*ED-511907	D SILICON 1N4002 100/1.0A [EXCEPT EO,EOH]
D6	*ED-511907	D SILICON 1N4002 100/1.0A [EXCEPT EO,EOH]
D7	*ED-511907	D SILICON 1N4002 100/1.0A [EXCEPT EO,EOH]
D8	*ED-511907	D SILICON 1N4002 100/1.0A [EXCEPT EO,EOH]
D9	*ED-412107J	D SILICON 1N4003 T26 200/1.0A
D10	*ED-511907	D SILICON 1N4002 100/1.0A [EXCEPT EO,EOH]
D11	*ED-412107J	D SILICON 1N4003 T26 200/1.0A
D12	*ED-511907	D SILICON 1N4002 100/1.0A [EXCEPT EO,EOH]
D13	ED-397319J	D ZENER H HZS15-2
D14	ED-408912J	D ZENER H HZS36-3
D15	ED-402230J	D ZENER H HZS36-1
D17	*ED-511907	D SILICON 1N4002 100/1.0A [EXCEPT EO,EOH]
D18	*ED-511907	D SILICON 1N4002 100/1.0A [EXCEPT EO,EOH]
D19	ED-307572	D SILICON H 1SS131
D20	ED-307572	D SILICON H 1SS131
D21	ED-307572	D SILICON H 1SS131
D22-A	ED-402204J	D ZENER H HZS11A3 [EA,EDG,EK]
D22-B	ED-396058J	D ZENER H HZS12B3 [EO,EOH]
D23	ED-403743J	D ZENER H HZS6B3
FR1	*ER-408375J	R FUSE V T05RF25SCPVTP1/4WR12K
FR2	*ER-400728J	R FUSE V T05 RF25SCVTP1/4WR12K
FR3	*ER-408375J	R FUSE V T05RF25SCPVTP1/4WR12K
FR4	*ER-328519	R FUSE H S10 ERD2FC 1/4W 68R0G
FR5	*ER-400605J	R FUSE V T05 ERD2FCV 1/4W1 5R0G
TR1	*ET-381175J	TR 2SD1856
TR2	*ET-408842J	TR 2SD2394 E,F
TR3	*ET-408842J	TR 2SD2394 E,F
TR4	*ET-411668J	TR 2SD2395 E,F
TR5	*ET-408841J	TR 2SB1565 E,F
TR6	ET-388338J	TR 2SB1425 S,E
TR7	ET-397160J	TR 2SC3330 R,S,T,U,V

14. DIODE P.C BOARD (EO,EOH)

Ref. No.	Part No.	Description
D24	*ED-379298	D SILICON DBA20B 100/2.0A

15. POWER SUPPLY (1) P.C BOARD (EM)

Ref. No.	Part No.	Description
C1	EC-408376J	C EC V CUT KMG 102M 50.0DC
C2	*EC-410530J	C EC V CUT KMG 332M 50.0DC
C3	EC-408426J	C EC V F05 LXF8 121M 50.0DC
C4	EC-403878J	C EC V T05 LXF8 271M 16.0DC
C14	EC-408426J	C EC V F05 LXF8 121M 50.0DC
C15	EC-403878J	C EC V T05 LXF8 271M 16.0DC
C20	EC-403371J	C EC V F05 LXF8 221M 25.0DC
C23	EC-404197J	C EC V T05 SXE8 330M 80.0DC
C24	EC-404197J	C EC V T05 SXE8 330M 80.0DC
C101	*EC-389414J	C CE V DE7090 B102K 400AC
D3	*ED-511907	D SILICON 1N4002 100/1.0A
D4	*ED-511907	D SILICON 1N4002 100/1.0A
D6	*ED-386226J	D SCHOTTKY RB100AT-32T26 40/1
D8	*ED-386226J	D SCHOTTKY RB100AT-32T26 40/1
D11	*ED-386226J	D SCHOTTKY RB100AT-32T26 40/1
D16	ED-307572	D SILICON H 1SS131
D17	*ED-412107J	D SILICON 1N4003 T26 200/1.0A
D18	*ED-412107J	D SILICON 1N4003 T26 200/1.0A
D19	ED-404032J	D ZENER H UTZJ39A
D20	ED-405524J	D ZENER H MTZJ36A T26
D27	ED-404387J	D ZENER H HZS16-1
D28	ED-391005J	D ZENER H HZS12B1
D54	ED-307572	D SILICON H 1SS131
D55	ED-307572	D SILICON H 1SS131
D57	ED-307572	D SILICON H 1SS131
D58	ED-405264J	D ZENER H UTZJ10C
D71	*ED-511907	D SILICON 1N4002 100/1.0A
D72	*ED-511907	D SILICON 1N4002 100/1.0A
D73	*ED-511907	D SILICON 1N4002 100/1.0A
D74	*ED-511907	D SILICON 1N4002 100/1.0A
D101	*ED-511907	D SILICON 1N4002 100/1.0A
D102	ED-403947J	D ZENER H UTZJ22C T26
D103	ED-307572	D SILICON H 1SS131
D104	ED-404031J	D ZENER H UTZJ11B T26
D106	ED-401046J	D SILICON RL104F-E T26 400/1A
D107	ED-403948J	D ZENER H UTZJ16C T26
D108	ED-405265J	D ZENER H UTZJ36C
D109	ED-405265J	D ZENER H UTZJ36C
F101	*EF-413079J	FUSE S505 T 250V 1.00A
FR1	*ER-400728J	R FUSE V T05 RF25SCVTP1/4WR12K
FR2	*ER-408375J	R FUSE V T05RF25SCPVTP1/4WR12K
FR3	*ER-400605J	R FUSE V T05 ERD2FCV 1/4W15R0G
FR4	*ER-400689J	R FUSE V T05 RF25SCVTP1/4WR68K
FR5	*ER-405441J	R FUSE V T05 RF25SCVTP1/4WR27K
FR102	*ER-401039J	R FUSE V T05 ERD2FCV 1/4W 4R7J
L1	EO-408381J	COIL FIX 2 C-5344-40 560K
L2	EO-408381J	COIL FIX 2 C-5344-40 560K
L3	EO-408381J	COIL FIX 2 C-5344-40 560K
L4	EO-408381J	COIL FIX 2 C-5344-40 560K
L6	EO-386541J	COIL FIX 1 ELF1010SKI 101K
L9	EO-410254J	COIL FIX 1 LHL06TB T05 681K
RL101	*EQ-400153J	RELAY POW AG2013 1TR 12V
TR1	*ET-366365	TR 2SB1185 E,F
TR5	*ET-366365	TR 2SB1185 E,F
TR6	*ET-356817	TR 2SB891 Q,R
TR9	*ET-366365	TR 2SB1185 E,F
TR12	*ET-405622J	TR 2SD2061 E,F
TR13	*ET-366365	TR 2SB1185 E,F
TR14	ET-360399	TR DTC114TS
TR15	ET-360399	TR DTC114TS
TR16	ET-397160J	TR 2SC3330 R,S,T,U,V
TR101	ET-389803J	TR 2SA933S R,S
TR102	ET-400218J	TR 2SC1740S R,S
TR103	ET-366168	TR 2SD1292 Q,R
TR104	ET-366365	TR 2SB1185 E,F
TR106	ET-389803J	TR 2SA933S R,S
TR107	*ET-404195J	TR 2SC4486 S,T T05

16. POWER SUPPLY (2) P.C BOARD (EM)

Ref. No.	Part No.	Description
D7	ED-405264J	D ZENER H UTZJ10C
D10	ED-307572	D SILICON H 1SS131
D50	ED-403732J	D ZENER H UTZJ5.6A
D56	ED-410359J	D ZENER H HZS15-1 T26
IC1	*EI-381575J	IC BA6121
L10	EO-380091J1	COIL FIX 2 C-5293-01 560K
TR2	*ET-405622J	TR 2SD2061 E,F
TR3	ET-389803J	TR 2SA933S R,S
TR4	ET-366168	TR 2SD1292 Q,R
TR7	*ET-405622J	TR 2SD2061 E,F
TR8	ET-389803J	TR 2SA933S R,S
TR50	ET-353897	TR DTC114ES

17. DIODE P.C BOARD (EM)

Ref. No.	Part No.	Description
D60	*ED-379298	D SILICON DBA20B 100/2.0A

18. POWER SUPPLY (1) P.C B0ARD (EOG-V,EOH-V)

Ref. No.	Part No.	Description
C1	EC-404196J	C EC V SXE12 102M 35.0DC
C2	EC-406635J	C EC V SXE16 222M 35.0DC
C4	EC-405269J	C EC V F05 LXF8 121M 35.0DC
C14	EC-405269J	C EC V F05 LXF8 121M 35.0DC
C15	EC-405269J	C EC V F05 LXF8 121M 35.0DC
C20	EC-403371J	C EC V F05 LXF8 221M 25.0DC
C23-A	EC-412318J	C EC V T05 LXA8 330M 63.0DC [EOG-V]
C23-B	EC-412135J	C EC V CUT LXF10 121M 63.0DC [EOH-V]
C24	EC-412136J	C EC V F05 LXF8 820M 63.0DC
C73	EC-403285J	C EC V T05 LXF6 121M 25.0DC
D1	*ED-511907	D SILICON 1N4002 100/1.0A
D2	*ED-511907	D SILICON 1N4002 100/1.0A
D3	*ED-511907	D SILICON 1N4002 100/1.0A
D4	*ED-511907	D SILICON 1N4002 100/1.0A
D6	*ED-386226J	D SCHOTTKY RB100AT-32T26 40/1
D8	*ED-386226J	D SCHOTTKY RB100AT-32T26 40/1
D11	*ED-386226J	D SCHOTTKY RB100AT-32T26 40/1
D16	ED-366684	D SILICON H 1SS136 F05
D17	*ED-412107J	D SILICON 1N4003 T26 200/1.0A
D18	*ED-412107J	D SILICON 1N4003 T26 200/1.0A
D19	ED-404032J	D ZENER H UTZJ39A
D20	ED-404033J	D ZENER H UTZJ33B
D27	ED-403265J	D ZENER H UTZJ15A T26
D30	ED-412105J	D ZENER H HZS5B1 T26
D32	ED-307572	D SILICON H 1SS131
D71	*ED-511907	D SILICON 1N4002 100/1.0A
D72	*ED-511907	D SILICON 1N4002 100/1.0A
D73	*ED-511907	D SILICON 1N4002 100/1.0A
D74	*ED-511907	D SILICON 1N4002 100/1.0A
D75	*ED-511907	D SILICON 1N4002 100/1.0A
D76	*ED-511907	D SILICON 1N4002 100/1.0A
D77	*ED-511907	D SILICON 1N4002 100/1.0A
D78	*ED-511907	D SILICON 1N4002 100/1.0A
D80	ED-403267J	D ZENER H MTZJ3.3B T26
D82	ED-403279J	D ZENER H UTZJ9.1B
D83	ED-386226J	D SCHOTTKY RB100AT-32T26 40/1
D88	ED-307572	D SILICON H 1SS131
D89	ED-307572	D SILICON H 1SS131
FL1	*EO-339907	COIL LF FKOB160MH16 1000.0UH [EOG-V]
FR1	*ER-400728J	R FUSE V T05 RF25SCVTP1/4WR12K
FR2	*ER-400688J	R FUSE V T05 RF25SCVTP1/4WR10K
FR3	*ER-328278	R FUSE H ERD2FC 1/4W 10R0G
FR4	*ER-307565	R FUSE H S10 ERD2FC 1/4W 6R8J
FR5	*ER-405441J	R FUSE V T05 RF25SCVTP1/4WR27K
L1	EO-408381J	COIL FIX 2 C-5344-40 560K
L2	EO-408381J	COIL FIX 2 C-5344-40 560K
L3	EO-408381J	COIL FIX 2 C-5344-40 560K
L4	EO-408381J	COIL FIX 2 C-5344-40 560K
L6	EO-386541J	COIL FIX 1 ELF1010SKI 101K
L9	EO-410254J	COIL FIX 1 LHL06TB T05 681K
R78	*ER-368461	R OMF H S12 FS 1W R22J
TR1	*ET-366365	TR 2SB1185 E,F
TR5	*ET-366365	TR 2SB1185 E,F
TR6	*ET-356817	TR 2SB891 Q,R
TR7	*ET-391025J	TR 2SD2012
TR9	*ET-366365	TR 2SB1185 E,F
TR12	*ET-408842J	TR 2SD2394 E,F
TR13	*ET-366365	TR 2SB1185 E,F
TR14	ET-397160J	TR 2SC3330 R,S,T,U,V
TR15	ET-397160J	TR 2SC3330 R,S,T,U,V
TR16	ET-397160J	TR 2SC3330 R,S,T,U,V
TR71	ET-353897	TR DTC114ES
TR72	ET-353897	TR DTC114ES
TR75	*ET-354083	TR 2SD1189 Q,R

19. POWER SUPPLY (2) P.C BOARD (EOG-V,EOH-V)

Ref. No.	Part No.	Description
C25	EC-408426J	C EC V F05 LXF8 121M 50.0DC
D31	ED-307572	D SILICON H 1SS131
D84	ED-307572	D SILICON H 1SS131
D85	ED-307572	D SILICON H 1SS131
D87	ED-403267J	D ZENER H MTZJ3.3B T26
IC1	*EI-381575J	IC BA6121
L10	EO-380091J1	COIL FIX 2 C-5293-01 560K
R77	*ER-368461	R OMF H S12 FS 1W R22J
TR2	*ET-391025J	TR 2SD2012
TR3	ET-389803J	TR 2SA933S R,S
TR8	ET-389803J	TR 2SA933S R,S
TR73	*ET-391025J	TR 2SD2012

20. VPST P.C BOARD (EOG-V)

Ref. No.	Part No.	Description
C601	EC-366613	C EC V CUT SME 102M 25.0DC
D1	ED-307572	D SILICON H 1SS131
D201	ED-307572	D SILICON H 1SS131
D601	ED-307572	D SILICON H 1SS131
D602	ED-405446J	D ZENER H UTZJ5.6B T26
FL101	EH-394684J	FILTER EMI ZBF503D-00TA T05
FR601	*ER-331188	R FUSE H S10 ERD2FC 1/4W 8R2J
IB101	EH-383056J	COMP R RGLE4X 103J
IC101	EI-416782J	IC UPD78014CW-019 QXVPT1
IC102	EI-410265J	IC ST24C04B1
IC103	EI-405224J	IC ST24C02AB1/AAB
IC104	EI-414884J	IC CF72307
IC105	EI-410125J	IC V53C464AP-80
IC106	EI-401050J	IC LVA523SA2
IC107	EI-394680J	IC AN3171K
IC108	EI-387019J	IC MC1377P
IC109	EI-414885J	IC CF72306
IC301	EI-385958J	IC SAA4700
L2	EO-345865	COIL FIX 1 EL0606SKI 100J
L3	EO-345865	COIL FIX 1 EL0606SKI 100J
L4	EO-345865	COIL FIX 1 EL0606SKI 100J
L5	EO-345865	COIL FIX 1 EL0606SKI 100J
L6	EO-345865	COIL FIX 1 EL0606SKI 100J
L121	EO-345865	COIL FIX 1 EL0606SKI 100J
L151	EO-410104J	COIL FIX 1 SPT0203SA T26 181J
L152	EO-410104J	COIL FIX 1 SPT0203SA T26 181J
L153	EO-345880	COIL FIX 1 EL0606SKI 820J
L154	EO-410099J	COIL FIX 1 SPT0203SA T26 470J
L155	EO-345865	COIL FIX 1 EL0606SKI 100J
L201	EO-345865	COIL FIX 1 EL0606SKI 100J
L202	EO-345865	COIL FIX 1 EL0606SKI 100J
L203	EO-345875	COIL FIX 1 EL0606SKI 390J
L204	EO-345873	COIL FIX 1 EL0606SKI 270J
L206	EO-345871	COIL FIX 1 EL0606SKI 180J
L207	EO-345874	COIL FIX 1 EL0606SKI 330J
L208	EO-345874	COIL FIX 1 EL0606SKI 330J
L301	EO-345865	COIL FIX 1 EL0606SKI 100J
L302	EO-345865	COIL FIX 1 EL0606SKI 100J
TR1	ET-397160J	TR 2SC3330 R,S,T,U,V
TR4	ET-369248	TR DTA114YS
TR151	ET-397160J	TR 2SC3330 R,S,T,U,V
TR152	ET-353899	TR 2SA1317 S,T,U
TR153	ET-353899	TR 2SA1317 S,T,U
TR154	ET-397160J	TR 2SC3330 R,S,T,U,V
TR155	ET-397160J	TR 2SC3330 R,S,T,U,V
TR201	ET-397160J	TR 2SC3330 R,S,T,U,V
TR202	ET-397160J	TR 2SC3330 R,S,T,U,V
TR203	ET-397160J	TR 2SC3330 R,S,T,U,V
TR204	ET-353899	TR 2SA1317 S,T,U
TR208	ET-353899	TR 2SA1317 S,T,U
TR601	ET-354083	TR 2SD1189 Q,R
X101	EI-414889J	OSC CE CST10.0MTW-TF01 T05
X102	EI-394675J	OSC X'TAL HC-49/U 13875KHZ
X103	EI-394673J	OSC X'TAL HC-49/U 8867.238KHZ

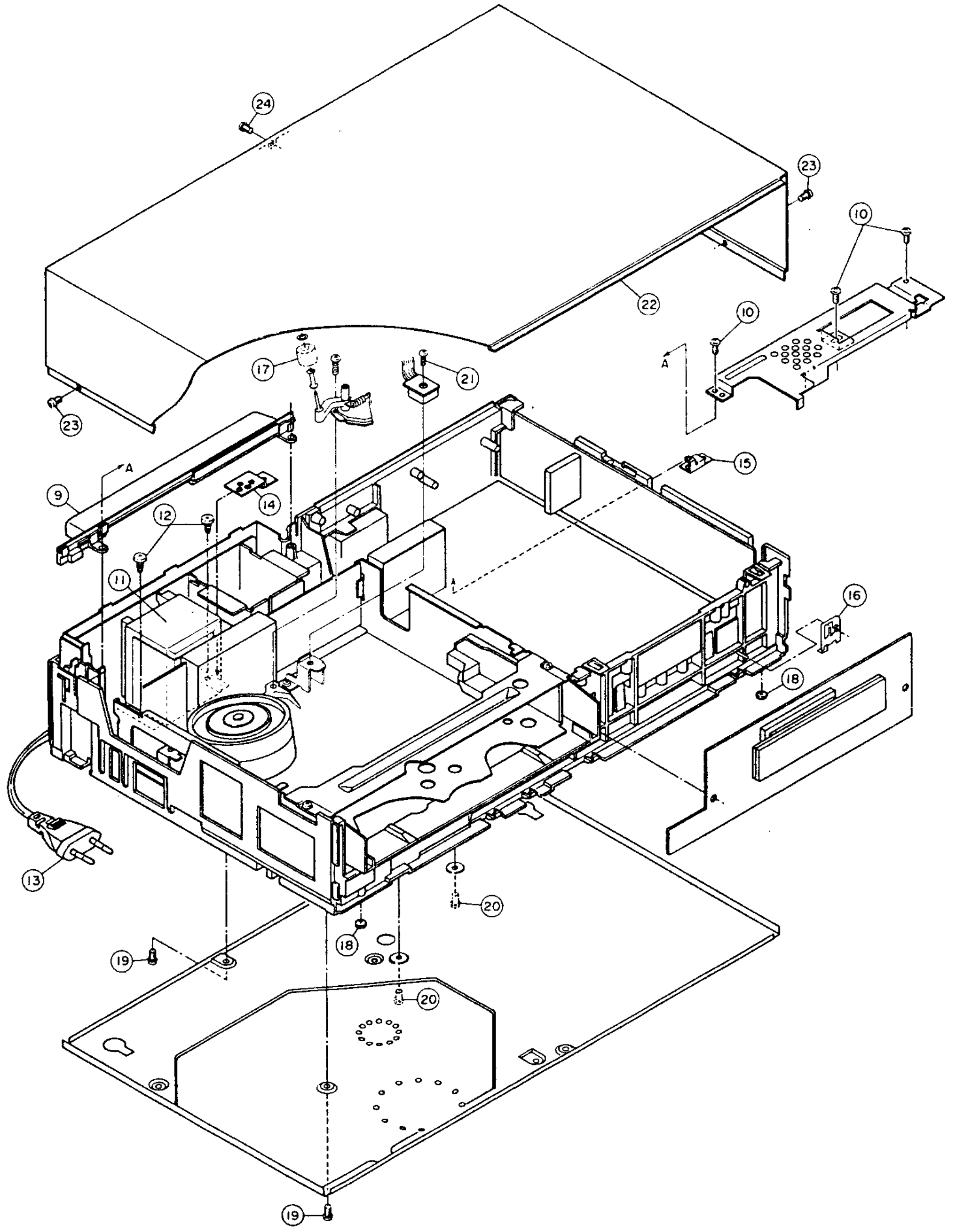
21. PDC PC. BOARD (EOH-V)

Ref. No.	Part No.	Description
D1	ED-307572	D SILICON H 1SS131
D101	ED-307572	D SILICON H 1SS131
D201	ED-307572	D SILICON H 1SS131
FL101	EH-394684J	FILTER EMI ZBF503D-00TA T05
FL102	EH-394684J	FILTER EMI ZBF503D-00TA T05
IB101	EH-383056J	COMP R RGLE4X 103J
IB102	EH-386637J	COMP R RGLE8X 103J
IC101	EI-410521J2	IC UPD75218CW-028 JXPDC3
IC102	EI-405224J	IC ST24C02AB1/AAB
IC103	EI-405224J	IC ST24C02AB1/AAB
IC104	EI-408434J	IC MV1815-1BA
IC105	EI-410125J	IC V53C464AP-80
IC106	EI-401050J	IC LVA523SA2
IC107	EI-394680J	IC AN3171K
IC108	EI-387019J	IC MC1377P
L1	EO-345865	COIL FIX 1 EL0606SKI 100J
L101	EO-345865	COIL FIX 1 EL0606SKI 100J
L102	EO-345865	COIL FIX 1 EL0606SKI 100J
L103	EO-345881	COIL FIX 1 EL0606SKI 101J
L121	EO-345865	COIL FIX 1 EL0606SKI 100J
L151	EO-410104J	COIL FIX 1 SPT0203SA T26 181J
L152	EO-410104J	COIL FIX 1 SPT0203SA T26 181J
L153	EO-345880	COIL FIX 1 EL0606SKI 820J
L154	EO-410099J	COIL FIX 1 SPT0203SA T26 470J
L155	EO-345865	COIL FIX 1 EL0606SKI 100J
L201	EO-345865	COIL FIX 1 EL0606SKI 100J
L202	EO-345865	COIL FIX 1 EL0606SKI 100J
L203	EO-345875	COIL FIX 1 EL0606SKI 390J
L204	EO-345873	COIL FIX 1 EL0606SKI 270J
L206	EO-345871	COIL FIX 1 EL0606SKI 180J
L207	EO-345874	COIL FIX 1 EL0606SKI 330J
L208	EO-345874	COIL FIX 1 EL0606SKI 330J
L251	EO-345865	COIL FIX 1 EL0606SKI 100J
TR1	ET-397160J	TR 2SC3330 R,S,T,U,V
TR101	ET-354415	TR DTA144ES
TR102	ET-397160J	TR 2SC3330 R,S,T,U,V
TR151	ET-397160J	TR 2SC3330 R,S,T,U,V
TR152	ET-353899	TR 2SA1317 S,T,U
TR153	ET-353899	TR 2SA1317 S,T,U
TR154	ET-397160J	TR 2SC3330 R,S,T,U,V
TR155	ET-397160J	TR 2SC3330 R,S,T,U,V
TR201	ET-397160J	TR 2SC3330 R,S,T,U,V
TR202	ET-397160J	TR 2SC3330 R,S,T,U,V
TR203	ET-397160J	TR 2SC3330 R,S,T,U,V
TR204	ET-353899	TR 2SA1317 S,T,U
TR208	ET-353899	TR 2SA1317 S,T,U
TR251	ET-397160J	TR 2SC3330 R,S,T,U,V
TR252	ET-353899	TR 2SA1317 S,T,U
TR253	ET-353899	TR 2SA1317 S,T,U
X101	EI-367882J1	OSC CE FCR4.19MC3 4.190MHZ
X102	EI-408433J	OSC X'TAL HC-43/U 27750KHZ
X103	EI-394673J	OSC X'TAL HC-49/U 8867.238KHZ

22. SUB P.C BOARD (EM)

Ref. No.	Part No.	Description
C1	EC-365397	C EC V CUT SME 332M 10.0DC
C2	EC-365397	C EC V CUT SME 332M 10.0DC
D1	ED-401099J	D SCHOTTKY MA719 T26 40/0.5A
D2	ED-401099J	D SCHOTTKY MA719 T26 40/0.5A
D3	ED-403267J	D ZENER H MTZJ3.3B T26
TR1	ET-366365	TR 2SB1185 E,F
TR2	ET-397160J	TR 2SC3330 R,S,T,U,V
TR3	ET-397160J	TR 2SC3330 R,S,T,U,V

FINAL ASSEMBLY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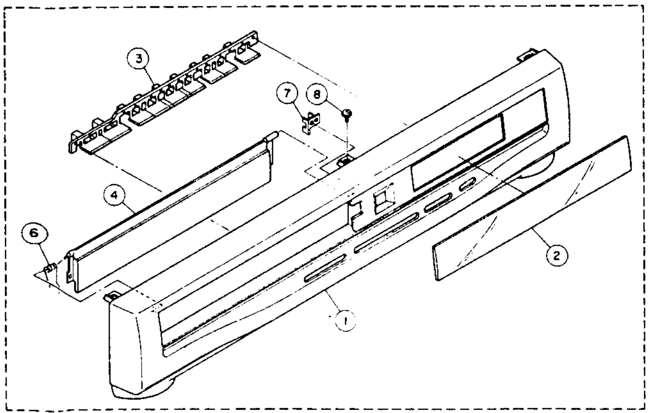
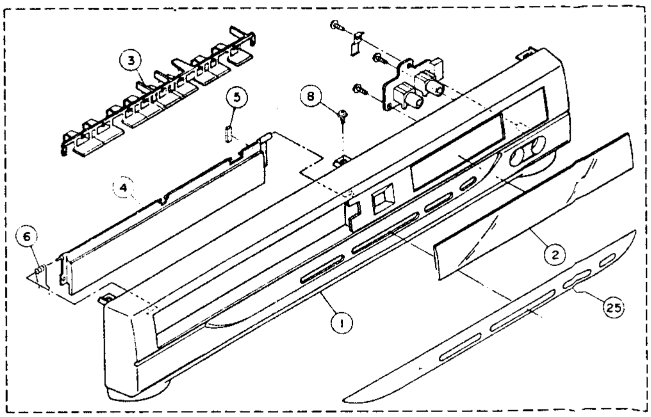


G40K, G43EK



EXCEPT G40EK, G43EK

23. FINAL ASSEMBLY

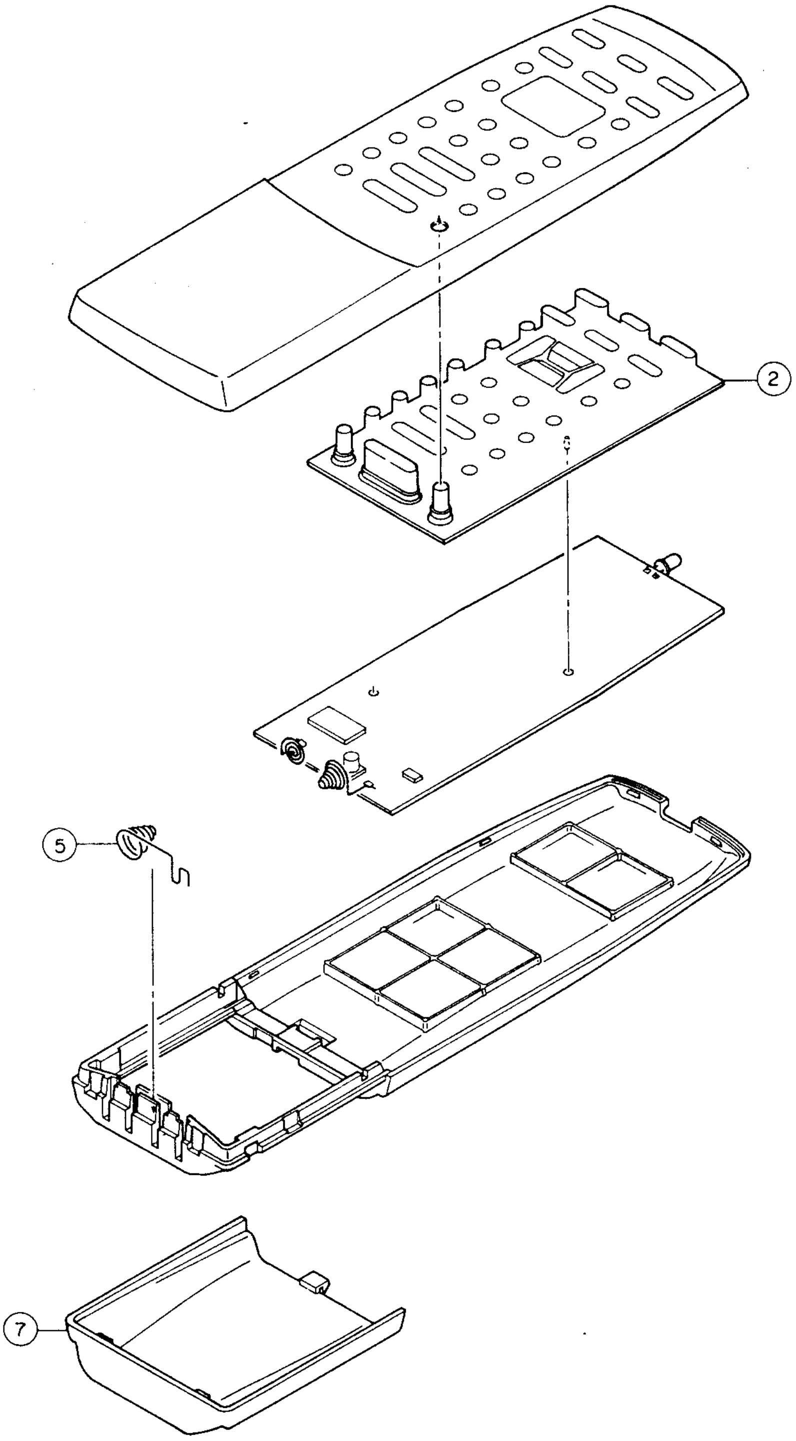
Ref. No.	Part No.	Description
1-A	SP-416031J	PANEL FRONT (D) E [EXCEPT G40EK,G43EK]
1-B	SP-415654J	PANEL FRONT (C) E [G40EK,G43EK]
2-A	SE-415651J	WINDOW FLD (C) [EA,EO,EOH]
2-B	SE-415816J	WINDOW FLD (C) 2 [EDG]
2-C	SE-415825J	WINDOW FLD (C) 3 [EM]
2-D	SE-415840J	WINDOW FLD (C) 6 [G40EK]
2-E	SE-417124E	WINDOW FLD (C) 11 (FR) [G43EK]
2-F	SE-416258J	WINDOW FLD (C) 11 [G44EK]
2-G	SE-416174J	WINDOW FLD (C) 9 [EOH-V]
2-H	SE-416168J	WINDOW FLD (C) 7 [EOG-V]
3-A	SB-416034J	BUTTON OP [EXCEPT G40EK,G43EK]
3-B	SB-415652J	BUTTON OP (C) [G40EK,G43EK]
4-A	SE-415930J	MASK CASSETTE VS-G40 (E1) [EA,EDG,G40EK,EO]
4-B	SE-415931J	MASK CASSETTE VS-G40 (E2) [EM]
4-C	SE-415932J	MASK CASSETTE VS-G43 (E) [EOH]
4-D	SE-417121E	MASK CASSETTE (C) VS-G43 (E) (FR) [G43EK]
4-E	SE-415933J	MASK CASSETTE VS-G44 (E) [G44EK,EOH-V]
4-F	SE-415935J	MASK CASSETTE VS-G45 (G) [EOG-V]
5	SZ-407193J	CUSHION MASK (2)
6	ZG-387370J	SP MASK
7	SZ-401874J	STOPPER MASK [G40EK,G43EK]
8	ZS-357946	PLX PAN30X10STL CMT C080
9	SC-387353J	COVER TRANS
10	ZS-378341	PLX BID30X12STL CMT
11-A	*BT-416855J	TRANS POW V1164 EA [EA,EK]
11-B	*BT-410491J	TRANS POW V1130 EDG [EDG]
11-C	*BT-410488J	TRANS POW V1130 EM [EM]
11-D	*BT-403873J	TRANS POW V1130 EO [EOH,EO]
11-E	*BT-410606J	TRANS POW V1146 EOG-V [EOG-V]
12	ZS-373962	PLX BID40X10STL CMT
13-A	*EW-404002M	AC CORD 200 SE-1 WITH TUBE E [EXCEPT EA,EK]
13-B	*EW-412366M	AC CORD 200 SA-5 WITH TUBE S [EA]
13-C	*EW-414845E	AC CORD 200 *V1164 WITH TUBE B [EK]
14	ZG-387505J	PLATE EARTH
15	ZG-387354J	PLATE EARTH (2)
16	ZG-392214J1	PLATE EARTH (3)
17	HZ-408193J	ROLLER HEAD CLEANER [EXCEPT EK]
18	SA-387507J	FOOT SX
19	ZS-358936	ST BID30X06STL CMT
20	ZS-362378	PLX BID30X10STL CMT
21	ZS-346786	ST PAN26X12STL CMT [EXCEPT EA,EDG,EK]
22	SP-407479J	COVER UPPER JX
23	ZS-385611J	DT BID26X06STL BNI
24	ZS-391046J	PLX BID26X10STL BNI
25-A	SE-415925J	PLATE OP (D) E [EXCEPT EOG-V,G40EK,G43EK]
25-B	SE-415928J	PLATE OP (D) G [EOG-V]

NOTE:
Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

24. ACCESSARY

Ref. No.	Part No.	Description
1	EW-348414	CORD PAL
2-A	AV-B1053A010A	REMOCON BLK RC-W400E [EA,EDG,EM,EO,G40EK]
2-B	AV-B1051A010C	REMOCON BLK RC-W401E [EOH-V]
2-C	AV-B1051A010D	REMOCON BLK RC-W401G [EOG-V]
2-D	AV-B1050A010C	REMOCON BLK RC-W402E [EOH]
2-E	AV-B1065A010B	REMOCON BLK RC-W412E [G43EK,G44EK]

REMOCON RC-W400E



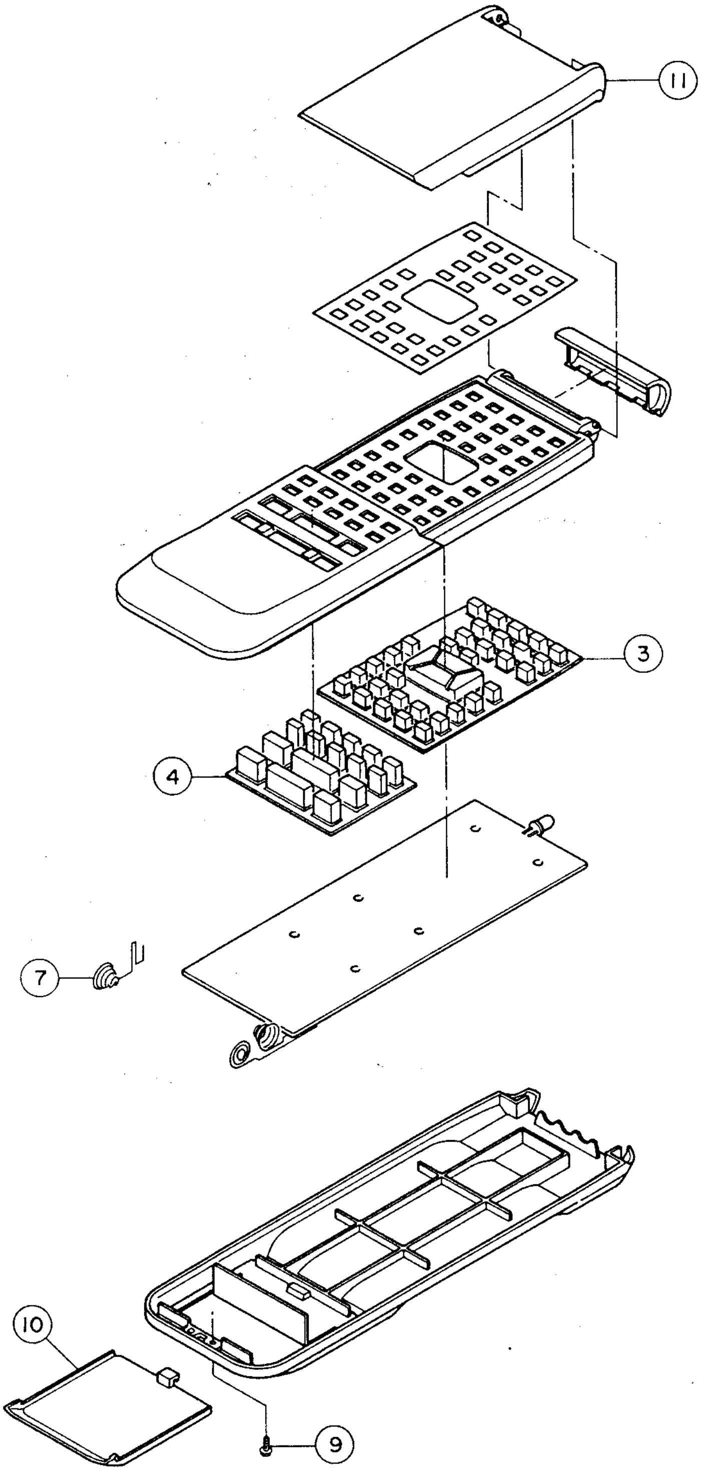
25. REMOCON RC-W400E

Ref. No.	Part No.	Description
2	MB-411655J	KEY RUBBER (2)
5	ZG-406719J	TERMINAL BATTERY (A3)
7	SC-407425J	COVER BATTERY

26. REMOCON P.C BOARD RC-W400

Ref. No.	Part No.	Description
D1	ED-403450J	D LED SE303ARF-C INFRARED
D2	ED-386031J	D SILICON CHIP MA110-TW
D3	ED-386031J	D SILICON CHIP MA110-TW
D4	ED-386031J	D SILICON CHIP MA110-TW
IC1	EI-376112	IC UPD6122G
TR1	ET-413009J	TR CHIP 2SC2884-Y TE12R T12E
X1	EI-390687J	OSC CE CSU455PL 455KHZ
1	ZG-406720J	TERMINAL BATTERY (A1)
2	ZG-406722J	TERMINAL BATTERY (A2)

REMOCON RC-W401E/G



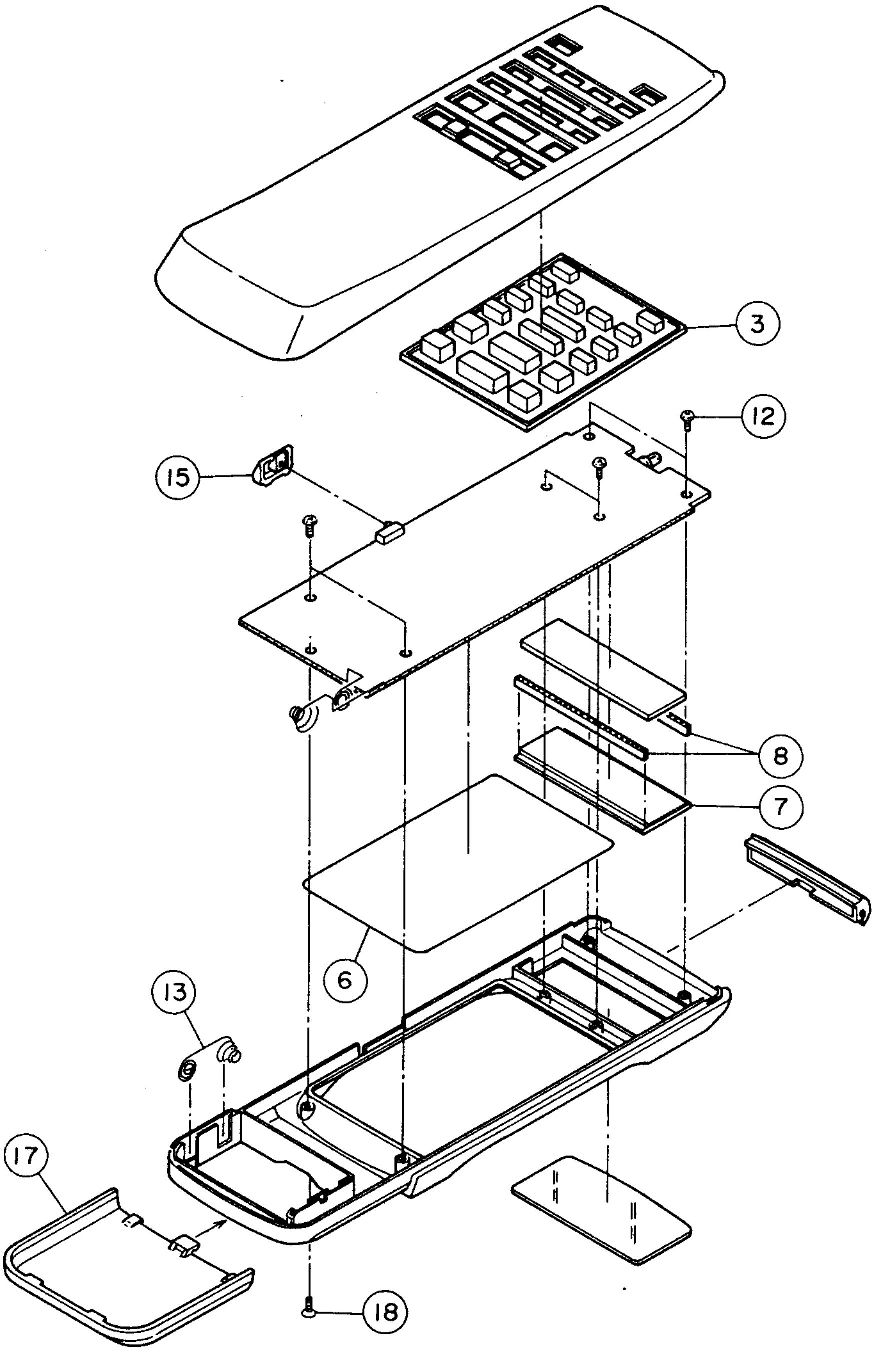
27. REMOCON RC-W401E/G

Ref. No.	Part No.	Description
3	MB-415212J	KEY RUBBER (A6)
4	MB-415216J	KEY RUBBER (B)
7	ZG-413475J	TERMINAL BATTERY (B3)
9	ZS-374389	PT BID20X06STL BNI
10	SC-415208J	COVER BATTERY
11	SP-415210J	DOOR PANEL

28. REMOCON P.C BOARD RC-W401

Ref. No.	Part No.	Description
D1	ED-403450J	D LED SE303ARF-C INFRARED
D2	ED-386031J	D SILICON CHIP MA110-TW
D3	ED-386031J	D SILICON CHIP MA110-TW
D4	ED-386031J	D SILICON CHIP MA110-TW
IC1	EI-376112	IC UPD6122G
TR1	ET-413009J	TR CHIP 2SC2884-Y TE12R T12E
X1	EI-390687J	OSC CE CSU455PL 455KHZ
1	ZG-413476J1	TERMINAL BATTERY (B1)
2	ZG-413477J	TERMINAL BATTERY (B2)

REMOCON RC-W402E



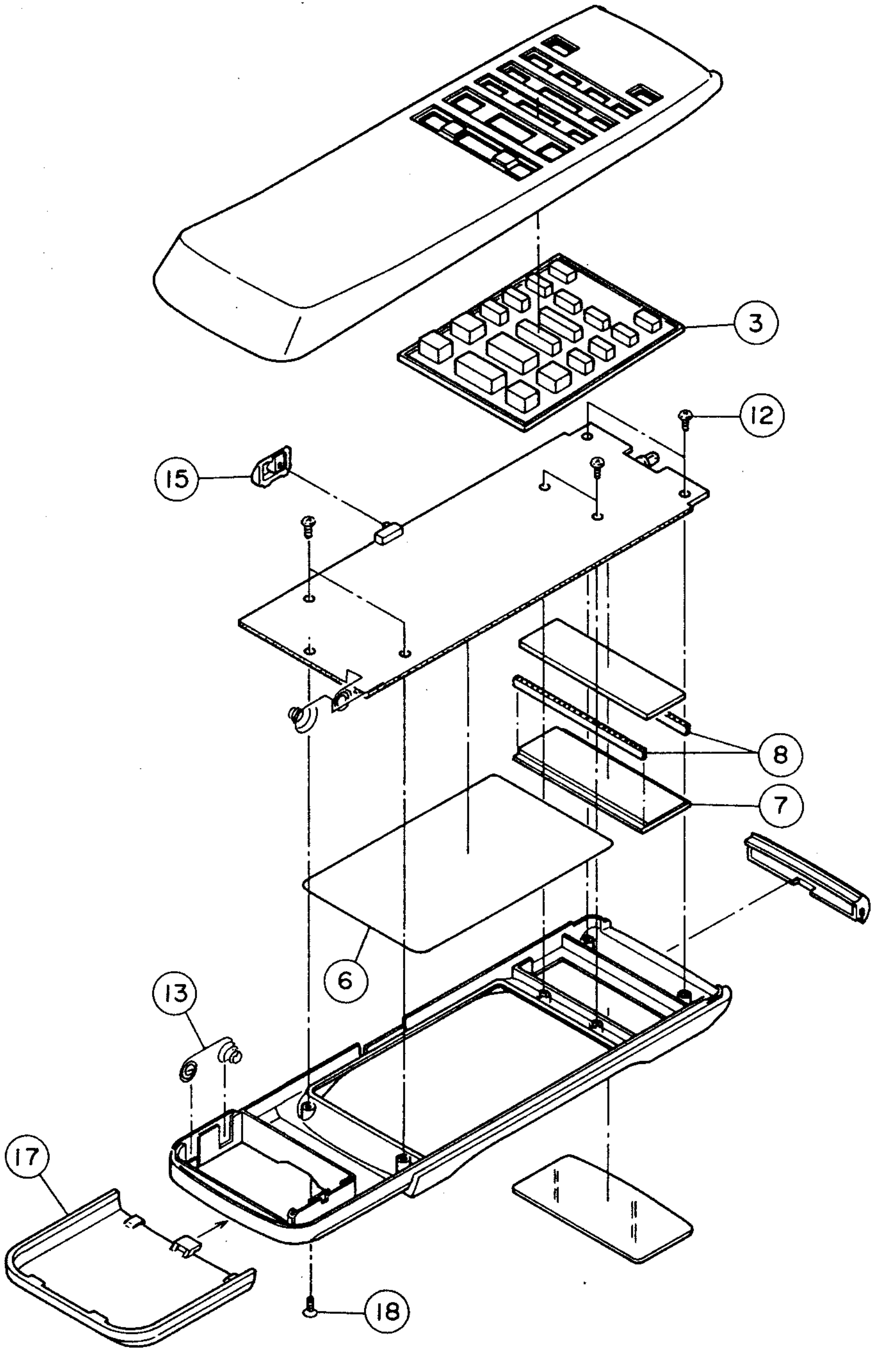
29. REMOCON RC-W402E

Ref. No.	Part No.	Description
3	MB-414326J	KEY RUBBER
6	EZ-414329J	IND NAME PLATE (2)-E
7	EM-408437J	IND LCD LD-B5444A ENGLISH
8	EJ-412291J	TERMINAL LCD (6) B1043
12	ZS-414462J	PT BID20X05STL BNI
13	ZG-414335J	TERMINAL BATTERY (B3)
15	SK-414322J	SLIDE KNOB
17	SC-414324J	COVER BATTERY
18	ZS-415396J	PT CTS20X08STL CMT

30. REMOCON P.C BOARD RC-W402

Ref. No.	Part No.	Description
D1	ED-416503J	D LED SID1010CXM LF51 INFRA RED
IC1	EI-412300J	IC M50933-131FP QXDLCD1
IC2	EI-400672J	IC S-8052ALB-LE
SW1	ES-414811J	SW SLIDE CHIP SSSS21 01-02
SW2	ES-394558J	SW TACT SKHRAA
TR1	ET-413009J	TR CHIP 2SC2884-Y TE12R T1
X1	EI-368825M	OSC X'TAL C-002RX 32.768KH
X2	EI-403451J	OSC CE CSB1200J 1.200MHZ
1	ZG-415292J	TERMINAL BATTERY (B1)
2	ZG-415294J	TERMINAL BATTERY (B2)

REMOCON RC-W412E



31. REMOCON RC-W412E

Ref. No.	Part No.	Description
3	MB-414326J	KEY RUBBER
6	EZ-417485J	IND NAME PLATE (12)-E
7	EM-408437J	IND LCD LD-B5444A ENGLISH
8	EJ-412291J	TERMINAL LCD (6) B1043
12	ZS-414462J	PT BID20X05STL BNI
13	ZG-414335J	TERMINAL BATTERY (B3)
15	SK-414322J	SLIDE KNOB
17	SC-414324J	COVER BATTERY
18	ZS-415396J	PT CTS20X08STL CMT

32. REMOCON P.C BOARD RC-W412

Ref. No.	Part No.	Description
D1	ED-416503J	D LED SID1010CXM LF5 INFRARED
IC1	EI-416842J	IC M50934-069FP QXUK[illegible]1
IC2	EI-400672J	IC S-8052ALB-LE
SW1	ES-414811J	SW SLIDE CHIP SSSS21[illegible]-02N
SW2	ES-394558J	SW TACT SKHRAA
TR1	ET-413009J	TR CHIP 2SC2884-Y TE1[illegible] T12E
X1	EI-368825M	OSC X'TAL C-002RX 32.768KHZ
X2	EI-403451J	OSC CE CSB1200J 1.200MHZ
1	ZG-415292J	TERMINAL BATTERY (B1
2	ZG-415294J	TERMINAL BATTERY (B2

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BAV1161Q500B	5-4-H
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ABBREVIATIONS (VIDEO)

ABBREVIATION	EXPLANATION
A	Audio or Analogue
AC	Alternating Current
ACC	Automatic Color Control
A/C	Audio and Control
ADJ	ADJust (ment)
AFC	Automatic Frequency Control
AFT	Automatic Fine Tuning
AGC	Automatic Gain Control
AH	Audio Head
AL	ALways (voltage)
ALC	Automatic Level Control
A-SW.P	Audio SWitching Pulse
A-MUTE	Audio MUTE
ANT	ANTenna
APC	Automatic Phase Control
ASSY	ASSemblY
BAL	BALance
B DOWN	Break DOWN
BGP	Burst Gate Pulse
BLK	BLocK or BLacK
BPF	Band Pass Filter
BU	Back Up (voltage)
B/W	Black and White
C	Chroma or Color
CCD	Charge Coupled Device
CCIR	Comité Consultatif International des Radio communications
CH (ch)	CHannel (channel)
CLK	CLocK
CM	Capstan Motor
CN	CoNnector
COMP	COMParator
CSW	Cassette SWitch
CSYNC	Composite SYNC
CTL	ConTrol
CUE	CUE
DAC	Digital to Analog Converter
DC	Direct Current
DEMOD	DEMODulator
DET	DETetct (DETector)
DL	Delay Line
DM	Drum Motor
DOC	Drop Out Compensator
D.P.E	Drum Phase Error
D.PG	Drum Pulse Generator
EE	Electronic to Electronic
EF	Emitter Follower
EMPHA	EMPHAsis
ENV	ENVelope
EP	Extended Play
EP ROM	Erasable Programmable ROM
EQ	EQualizer
FE	Full track Erase
FF	Flip-Flop or Fast Foward
FG	Frequency Generator
Fig	Figure
FLD	FLuorescent Display
FM	Frequency Modulation
Fo	resonance Frequency
FREQ	FREQuency
GND	GrouND
H	Horizontal
HP	Horizontal (sync) pulse
HPF	High Pass Filter
HQ	High Quality System
IC	Integrated Circuit
ID	IDentification
IDL	IDLe (Voltage)
IMS	Interactive Monitor System
INS	INSert
INV	INVerter
L	Left
LED	Light Emitting Diode
LIM	LIMitter
LM	Loading Motor
LM STP	Loading Motor STop
LP	Long Play
LPF	Low Pass Filter
ME-SECAM	Middle East SECAM
MI-COM	MIcro COMputer
MM	Mono-stayble Multi
MOD	MODulator
MRS	Motor ReverSe
NG	Noise Gate
NICAM	Near Instanteneous Compand Audio Multiplex
NON-LIN	NON-LINear
N.T.S.C.	National Television System Committee
OSC	OSCillator
PAL	Phase Alternation by Line
PB	Play Back
PCB (P.C.B)	Printed Circuit Board
P-COM	Phase-COMparator
P DOWN	Power DOWN
PG	Pulse Generator
P.I.P	Picture In Picture
PL, PLG	PLunger (PLunGer)
PRG (PGM)	PRoGram (ProGraM)
PU	Pick UP (head, pulse)
PWR	PoWeR
Q	Quality factor
R	Right
RAM	Random Access Memory
REC	RECord
REF	REFerence
REF-V	REFerence Vertical signal
REG	REGulator
REV (REVW)	REView (REVieW)
REW	REWind
RF	Radio Frequency
ROM	Read Only Memory
R.S SW	Record-Safety SWitch
RST (RES)	ReSet (RESet)
RVS	ReVerSe
S	Sensor, Shield
SAW	Surface Acoustic Wave
SC	SimulCast
S CLK	Serial CLocK
SECAM	SÉquentiel Couleur À Mémoire
S & H	Sample and Hold
SLP	Super Long Play
SP	Standard Play
SPD	SPeeD
SRP	Supply Reel Pulse
SRV	SeRVo
SOW	Sync On Word
STBY	STandBY
S.VHS	Super VHS
SW	SWitch
SW'NG	SWitchiNG
SWP	SWitching Pulse
SYNC	SYNChronize
T-AUDIO	Tuner AUDIO
TPZ (TRAPE)	TraPeZoid (TRAPEzoid)
TRK	TRacKing
TRP	Take up Reel Pulse
T/U	Take Up
TV	TeleVision
UHF	Ultra High Frequency
UNR	UNRegulated (voltage)
V	Vertical or Video
VASS	Video Address Search System
VCO	Voltage Controlled Oscillator
VH	Video Head
VHF	Very High Frequency
VHS	Video Home System
VIF	Video Intermediate Frequency
VISS	Video Index Search System
VJ	Video Judge
VM	Voltage for Memory
VOB	Video On Blank
VOW	Video On Word
VP	Vertical (sync) Pulse
VPS	Video Program System
VPT	Video Programming by video Text
VT	Voltage for Tuning
WHT	WHiTe
Y	Luminance
2H	2 Hour (SP)
4H	4 Hour (LP)
6H	6 Hour (SLP/EP)

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MODEL **VS-G40**EA/EDG/EK/EM/EO
MODEL **VS-G43**EK/EOH
MODEL **VS-G44**EK/EOH-V
MODEL **VS-G45**EOG-V

SCHEMATIC DIAGRAMS AND PC BOARDS

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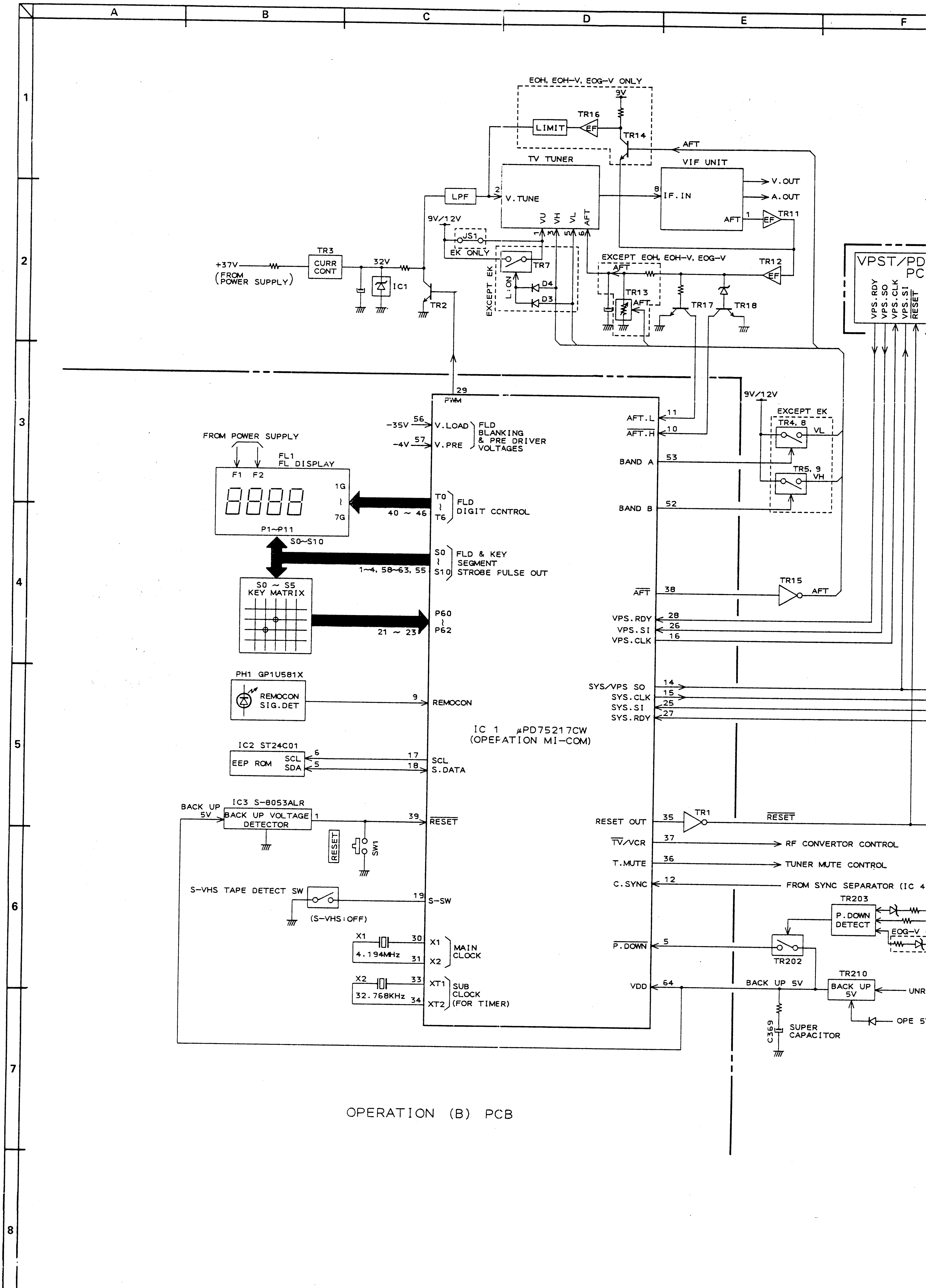
III. INFORMATION OF ICs 45

Use these schematic diagrams and PC boards together with the provided service manual.


A
B
C
D
E
F
1
2
3
4
5
6
7
8
EOH, EOH-V, EOG-V ONLY
9V
TR16
LIMIT
EF
TR14
AFT
TV TUNER
VIF UNIT
LPF
2
V.TUNE
8
IF.IN
V.OUT
A.OUT
AFT
1
TR11
EF
9V/12V
VU
VH
VL
AFT
JS1
EK ONLY
TR3
CURR CONT
32V
+37V
(FROM POWER SUPPLY)
IC1
TR2
EXCEPT EK
L:ON
TR7
D4
D3
EXCEPT EOH, EOH-V, EOG-V
AFT
TR12
EF
TR13
AFT
TR17
TR18
VPST/PD
PC
VPS.RDY
VPS.SO
VPS.CLK
VPS.SI
RESET
29
PWM
9V/12V
EXCEPT EK
TR4, 8
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11
AFT.H
10
BAND A
53
BAND B
52
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56
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-4V
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V.PRE
FLD BLANKING & PRE DRIVER VOLTAGES
FROM POWER SUPPLY
FL1
FL DISPLAY
F1
F2
1G
7G
8888
P1~P11
40 ~ 46
T0
T6
FLD DIGIT CONTROL
S0~S10
1~4, 58~63, 55
S0
S10
FLD & KEY SEGMENT STROBE PULSE OUT
S0 ~ S5
KEY MATRIX
21 ~ 23
P60
P62
AFT
38
TR15
AFT
VPS.RDY
28
VPS.SI
26
VPS.CLK
16
PH1 GP1U581X
REMOCON SIG.DET
9
REMOCON
SYS/VPS SO
14
SYS.CLK
15
SYS.SI
25
SYS.RDY
27
IC 1 µPD75217CW
(OPERATION MI-COM)
IC2 ST24C01
EEP ROM
SCL
SDA
6
5
17
18
SCL
S.DATA
BACK UP 5V
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BACK UP VOLTAGE DETECTOR
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RESET
RESET
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RESET
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(S-VHS:OFF)
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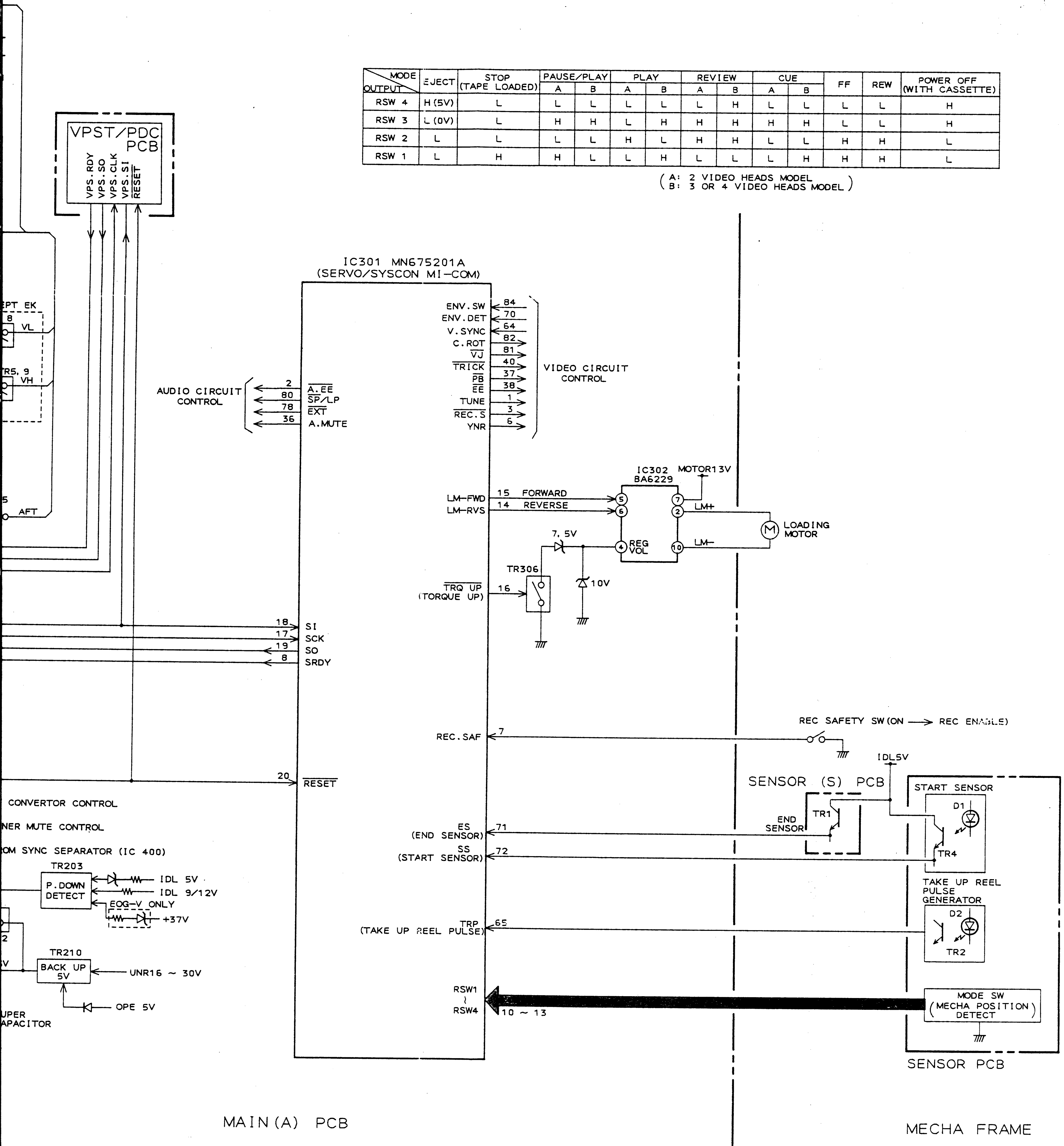
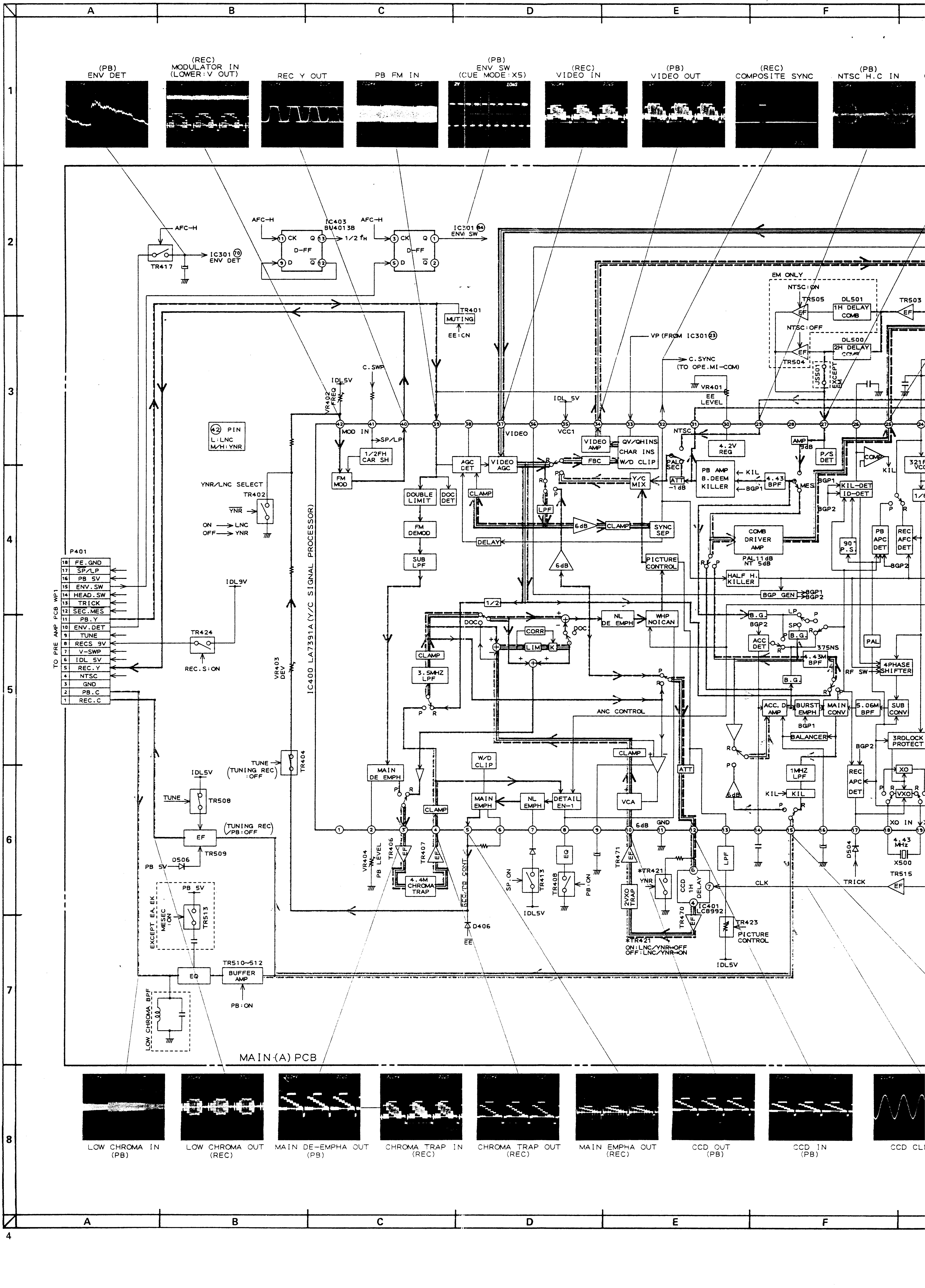
EOG-V
P.DOWN
5
TR202
X1
4.194MHz
30
31
X1
X2
MAIN CLOCK
X2
32.768KHz
33
34
XT1
XT2
SUB CLOCK (FOR TIMER)
VDD
64
BACK UP 5V
TR210
BACK UP 5V
UNR
OPE 5
C369
SUPER CAPACITOR
OPERATION (B) PCB

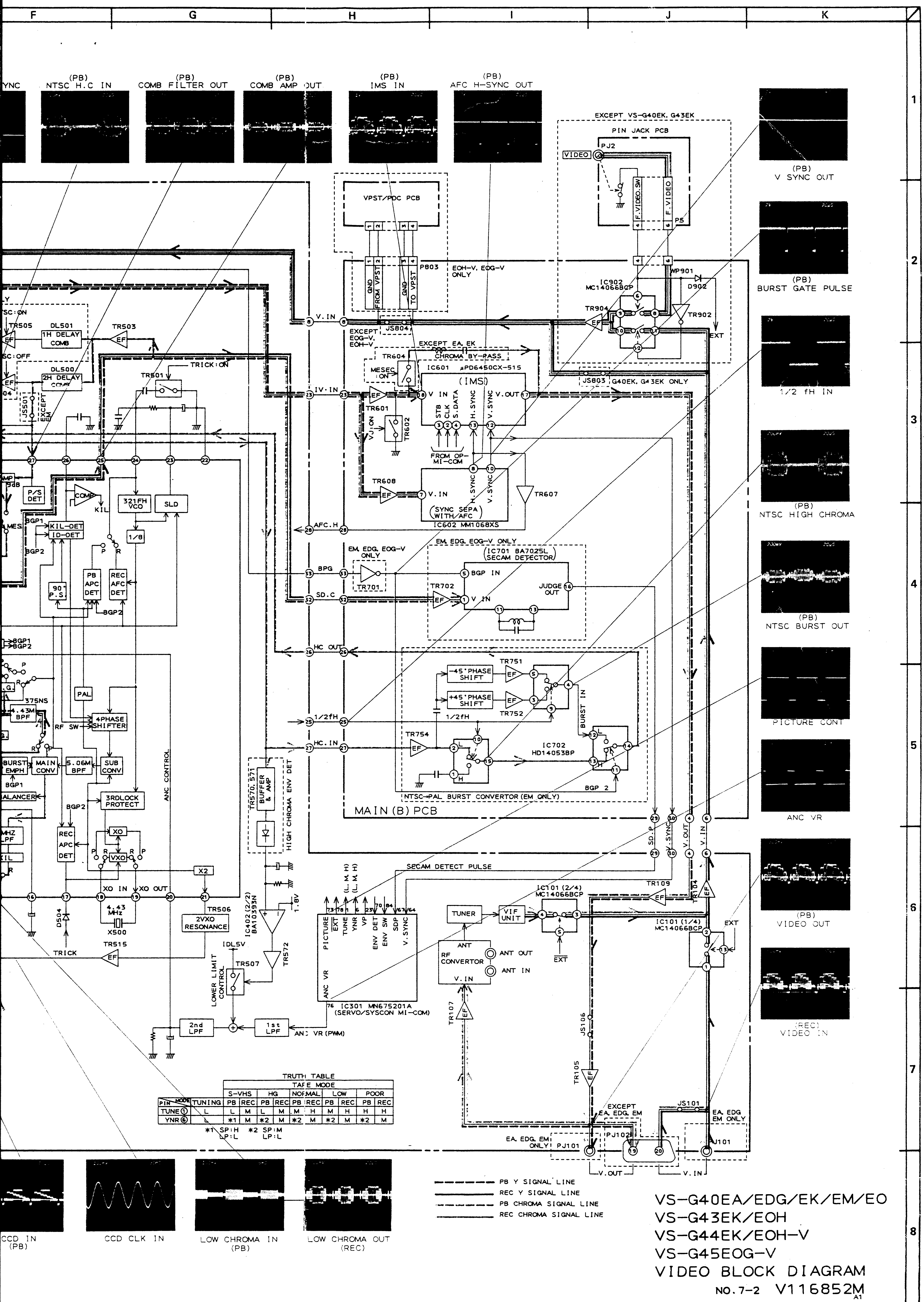
MODE / OUTPUT	EJECT	STOP (TAPE LOADED)	PAUSE/PLAY		PLAY		REVIEW		CUE		FF	REW	POWER OFF (WITH CASSETTE)
			A	B	A	B	A	B	A	B			
RSW 4	H (5V)	L	L	L	L	L	L	H	L	L	L	L	H
RSW 3	L (0V)	L	H	H	L	H	H	H	H	H	L	L	H
RSW 2	L	L	L	L	H	L	H	H	L	L	H	H	L
RSW 1	L	H	H	L	L	H	L	L	L	H	H	H	L

(A: 2 VIDEO HEADS MODEL
B: 3 OR 4 VIDEO HEADS MODEL)


VPST/PDC PCB
VPS.RDY
VPS.SO
VPS.CLK
VPS.SI
RESET
EPT EK
8
VL
TR5, 9
VH
5
AFT
IC301 MN675201A
(SERVO/SYSCON MI-COM)
AUDIO CIRCUIT CONTROL
2
80
78
36
A.EE
SP/LP
EXT
A.MUTE
ENV.SW
ENV.DET
V.SYNC
C.ROT
VJ
TRICK
PB
EE
TUNE
REC.S
YNR
84
70
64
82
81
40
37
38
1
3
6
VIDEO CIRCUIT CONTROL
IC302 BA6229
MOTOR13V
LM-FWD
LM-RVS
15 FORWARD
14 REVERSE
5
6
7
2
4
10
REG VOL
LM+
LM−
LOADING MOTOR
M
7.5V
10V
TR306
TRQ UP (TORQUE UP)
16
18
17
19
8
SI
SCK
SO
SRDY
REC.SAF
7
REC SAFETY SW (ON ⟶ REC ENABLE)
20
RESET
CONVERTOR CONTROL
NER MUTE CONTROL
OM SYNC SEPARATOR (IC 400)
TR203
P.DOWN DETECT
IDL 5V
IDL 9/12V
EOG-V ONLY
+37V
2
V
TR210
BACK UP 5V
UNR16 ~ 30V
OPE 5V
UPER
APACITOR
ES (END SENSOR)
71
SS (START SENSOR)
72
TRP (TAKE UP REEL PULSE)
65
RSW1 ~ RSW4
10 ~ 13
IDL5V
SENSOR (S) PCB
END SENSOR
TR1
START SENSOR
D1
TR4
TAKE UP REEL PULSE GENERATOR
D2
TR2
MODE SW (MECHA POSITION DETECT)
SENSOR PCB
MAIN (A) PCB
MECHA FRAME

VS-G40EA/EDG/EK/EM/EO
VS-G43EK/EOH
VS-G44EK/EOH-V
VS-G45EOG-V
OPERATION & SYSCON
BLOCK DIAGRAM
NO.7-1 V116851M A2


A
B
C
D
E
F
1
2
3
4
5
6
7
8
(PB) ENV DET
(REC) MODULATOR IN (LOWER:V OUT)
REC Y OUT
PB FM IN
(PB) ENV SW (CUE MODE:X5)
(REC) VIDEO IN
(PB) VIDEO OUT
(REC) COMPOSITE SYNC
(PB) NTSC H.C IN
AFC-H
TR417
IC301 ⑦⓪ ENV DET
IC403 BU4013B
CK
Q
D
D-FF
1/2 fH
IC301 ⑧④ ENV SW
TR401
MUTING
EE:ON
VP (FROM IC301㉓)
C.SYNC (TO OPE.MI-COM)
VR401 EE LEVEL
EM ONLY
NTSC:ON
TR505
DL501
1H DELAY COMB
TR503
NTSC:OFF
DL500
2H DELAY COMB
TR504
JS501
EXCEPT EM
C.SWP
IDL5V
VR402 FREQ
MOD IN
SP/LP
1/2FH CAR SH
FM MOD
㊷ PIN
L:LNC
M/H:YNR
YNR/LNC SELECT
TR402
YNR
ON → LNC
OFF → YNR
AGC DET
VIDEO AGC
VIDEO
IDL 5V
VCC1
VIDEO AMP
QV/QHINS CHAR INS W/D CLIP
FBC
Y/C MIX
NTSC
4.2V REG
PAL/SEC
ATT -1dB
PB AMP B.DEEM KILLER
KIL
BGP1
4.43 BPF
MES
AMP 9dB
P/S DET
COMP
KIL
321F VCO
KIL-DET
ID-DET
BGP2
DOUBLE LIMIT
DOC DET
CLAMP
FM DEMOD
LPF
6dB
SYNC SEP
DELAY
COMB DRIVER AMP
PAL 11dB NT 5dB
90° P.S.
PB APC DET
REC AFC DET
SUB LPF
PICTURE CONTROL
HALF H. KILLER
BGP GEN
P401
18 FE.GND
17 SP/LP
16 PB 5V
15 ENV.SW
14 HEAD.SW
13 TRICK
12 SEC.MES
11 PB.Y
10 ENV.DET
9 TUNE
8 RECS 9V
7 V-SWP
6 IDL 5V
5 REC.Y
4 NTSC
3 GND
2 PB.C
1 REC.C
TO PRE AMP PCB WP1
IDL9V
TR424
REC.S:ON
IC400 LA7391A (Y/C SIGNAL PROCESSOR)
VR403 DEV
1/2
DOC
CORR
LIM
K
NL DE EMPH
WHP NOICAN
B.G.
LP
SP
ACC DET
375NS
4.43M BPF
PAL
4PHASE SHIFTER
RF SW
3.5MHZ LPF
ANC CONTROL
ACC. D AMP
BURST EMPH
MAIN CONV
5.06M BPF
SUB CONV
BALANCER
3RDLOCK PROTECT
TUNE (TUNING REC) :OFF
TR404
IDL5V
TR508
EF
TR509
(TUNING REC / PB:OFF)
MAIN DE EMPH
W/D CLIP
MAIN EMPH
NL EMPH
DETAIL EN-1
CLAMP
VCA
ATT
1MHZ LPF
KIL
REC APC DET
XO
VXO
GND
6dB
XO IN
4.43 MHz X500
PB 5V
D506
VR404 PB LEVEL
TR406
TR407
4.4M CHROMA TRAP
REC/PB CONT
D406
EE
SP ON
TR413
IDL5V
EQ
TR408
PB ON
TR471
2VXO TRAP
*TR421 YNR
CCD 1H DELAY
IC401 LC8992
TR470
TR423 PICTURE CONTROL
IDL5V
LPF
CLK
TRICK
D504
TR515
*TR421 ON:LNC/YNR→OFF OFF:LNC/YNR→ON
EXCEPT EA, EK MESEC :ON
TR513
TR510-512
BUFFER AMP
PB:ON
LOW CHROMA BPF
MAIN (A) PCB
LOW CHROMA IN (PB)
LOW CHROMA OUT (REC)
MAIN DE-EMPHA OUT (PB)
CHROMA TRAP IN (REC)
CHROMA TRAP OUT (REC)
MAIN EMPHA OUT (REC)
CCD OUT (PB)
CCD IN (PB)
CCD CL


F
G
H
I
J
K
1
2
3
4
5
6
7
8
(PB) NTSC H.C IN
(PB) COMB FILTER OUT
(PB) COMB AMP OUT
(PB) IMS IN
(PB) AFC H-SYNC OUT
(PB) V SYNC OUT
(PB) BURST GATE PULSE
1/2 fH IN
(PB) NTSC HIGH CHROMA
(PB) NTSC BURST OUT
PICTURE CONT
ANC VR
(PB) VIDEO OUT
(REC) VIDEO IN
CCD IN (PB)
CCD CLK IN
LOW CHROMA IN (PB)
LOW CHROMA OUT (REC)
EXCEPT VS-G40EK, G43EK
PIN JACK PCB
VIDEO
PJ2
F.VIDEO.SW
F.VIDEO
P5
VPST/PDC PCB
GND FROM VPST
GND TO VPST
P803
EOH-V, EOG-V ONLY
IC902 MC14066BCP
WP901
D902
TR904
TR902
EXT
V.IN
EXCEPT EOG-V, EOH-V
JS804
EXCEPT EA, EK
CHROMA BY-PASS
TR604
MESEC ON
IC601 μPD6450CX-515
(IMS)
V.OUT
STB
CLK
S.DATA
H.SYNC
V.SYNC
FROM OP-MI-COM
JS803 G40EK, G43EK ONLY
TR601
TR602
TR608
TR607
(SYNC SEPA WITH AFC)
IC602 MM1068XS
AFC.H
IV.IN
TSC:ON
TR505
DL501 1H DELAY COMB
TR503
SC:OFF
DL500 2H DELAY COMB
JS501 EXCEPT EM
TRICK:ON
TR501
P/S DET
COMP
KIL
BGP1
KIL-DET
ID-DET
BGP2
321FH VCO
SLD
1/8
90° P.S.
PB APC DET
REC AFC DET
EM, EDG, EOG-V ONLY
BPG
TR701
SD.C
EM, EDG, EOG-V ONLY
(IC701 BA7025L SECAM DETECTOR)
BGP IN
V IN
JUDGE OUT
TR702
HC OUT
TR751
-45°PHASE SHIFT
+45°PHASE SHIFT
TR752
BURST IN
1/2fH
HC.IN
TR754
IC702 HD14053BP
BGP 2
NTSC→PAL BURST CONVERTOR (EM ONLY)
MAIN (B) PCB
PAL
375NS
4.43M BPF
RF SW
4PHASE SHIFTER
BURST EMPH
MAIN CONV
5.06M BPF
SUB CONV
BALANCER
3RDLOCK PROTECT
REC APC DET
XO
VXO
X2
XO IN
XO OUT
4.43 MHz
X500
D504
TRICK
TR515
TR506 2VXO RESONANCE
ANC CONTROL
TR570, 571 BUFFER & AMP
HIGH CHROMA ENV DET
IC402 (2/2) BA10393N
1.8V
TR572
IDL5V
TR507
LOWER LIMIT CONTROL
2nd LPF
1st LPF
ANC VR (PWM)
SECAM DETECT PULSE
PICTURE/EXT
TUNE (L, M, H)
YNR (L, M, H)
VP
ENV DET
ENV SW
SDP
V.SYNC
ANC VR
IC301 MN675201A (SERVO/SYSCON MI-COM)
TUNER
VIF UNIT
IC101 (2/4) MC14066BCP
ANT
RF CONVERTOR
ANT OUT
ANT IN
TR107
TR109
TR104
IC101 (1/4) MC14066BCP
SD.P
V.SYNC
V.OUT
V.IN
JS106
TR105
EXCEPT EA, EDG, EM
JS101
EA, EDG EM ONLY
EA, EDG, EM ONLY PJ101
PJ102
J101
V.OUT
V.IN

TRUTH TABLE

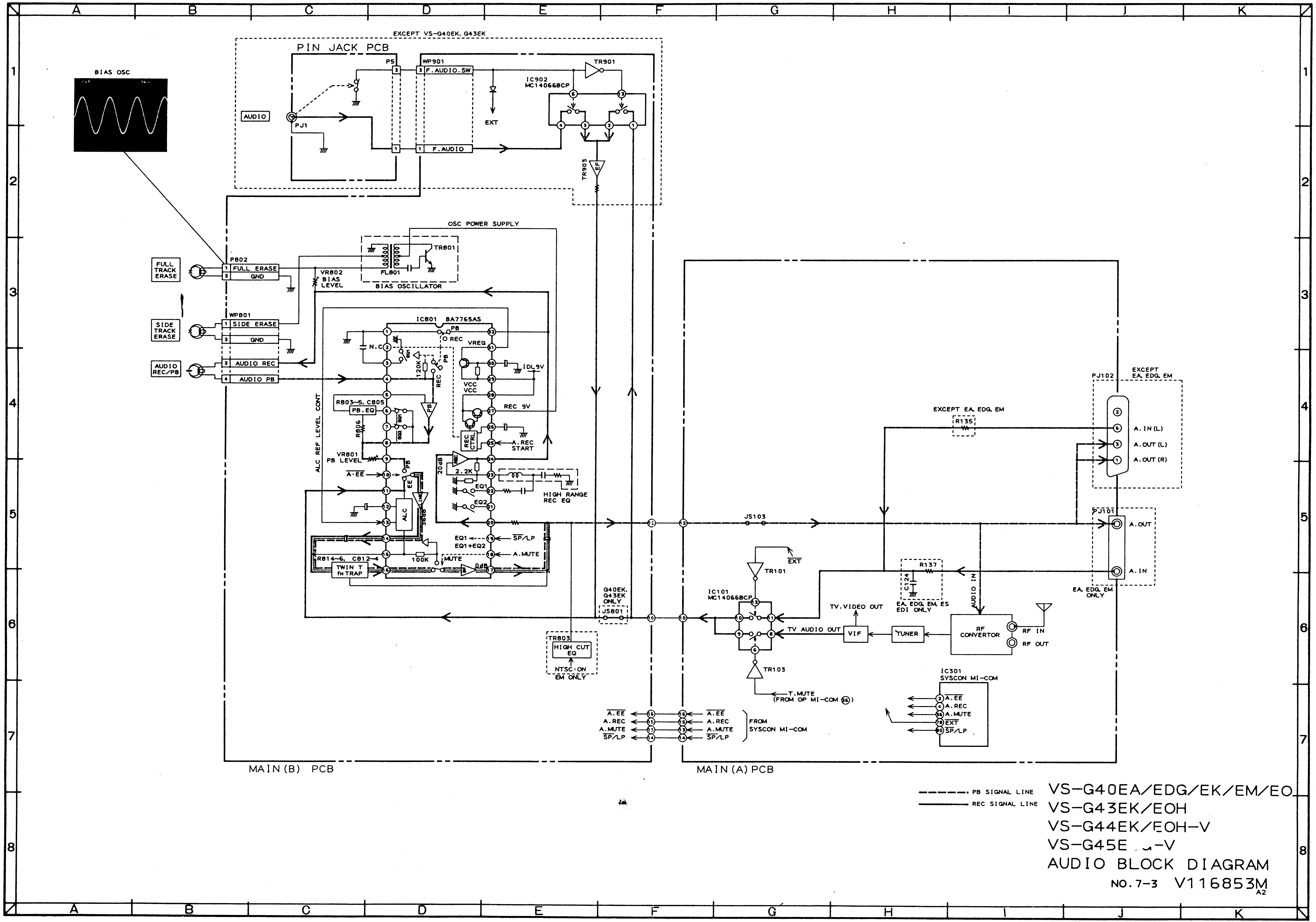
PIN \ MODE	TUNING	TAPE MODE									
		S-VHS		HG		NORMAL		LOW		POOR	
		PB	REC	PB	REC	PB	REC	PB	REC	PB	REC
TUNE ①	L	L	M	L	M	M	H	M	H	H	H
YNR ⑥	L	*1	M	*2	M	*2	M	*2	M	*2	M

*1 SP:H
LP:L
*2 SP:M
LP:L

- - - - PB Y SIGNAL LINE
———— REC Y SIGNAL LINE
— - — PB CHROMA SIGNAL LINE
— — — REC CHROMA SIGNAL LINE

VS-G40EA/EDG/EK/EM/EO
VS-G43EK/EOH
VS-G44EK/EOH-V
VS-G45EOG-V
VIDEO BLOCK DIAGRAM

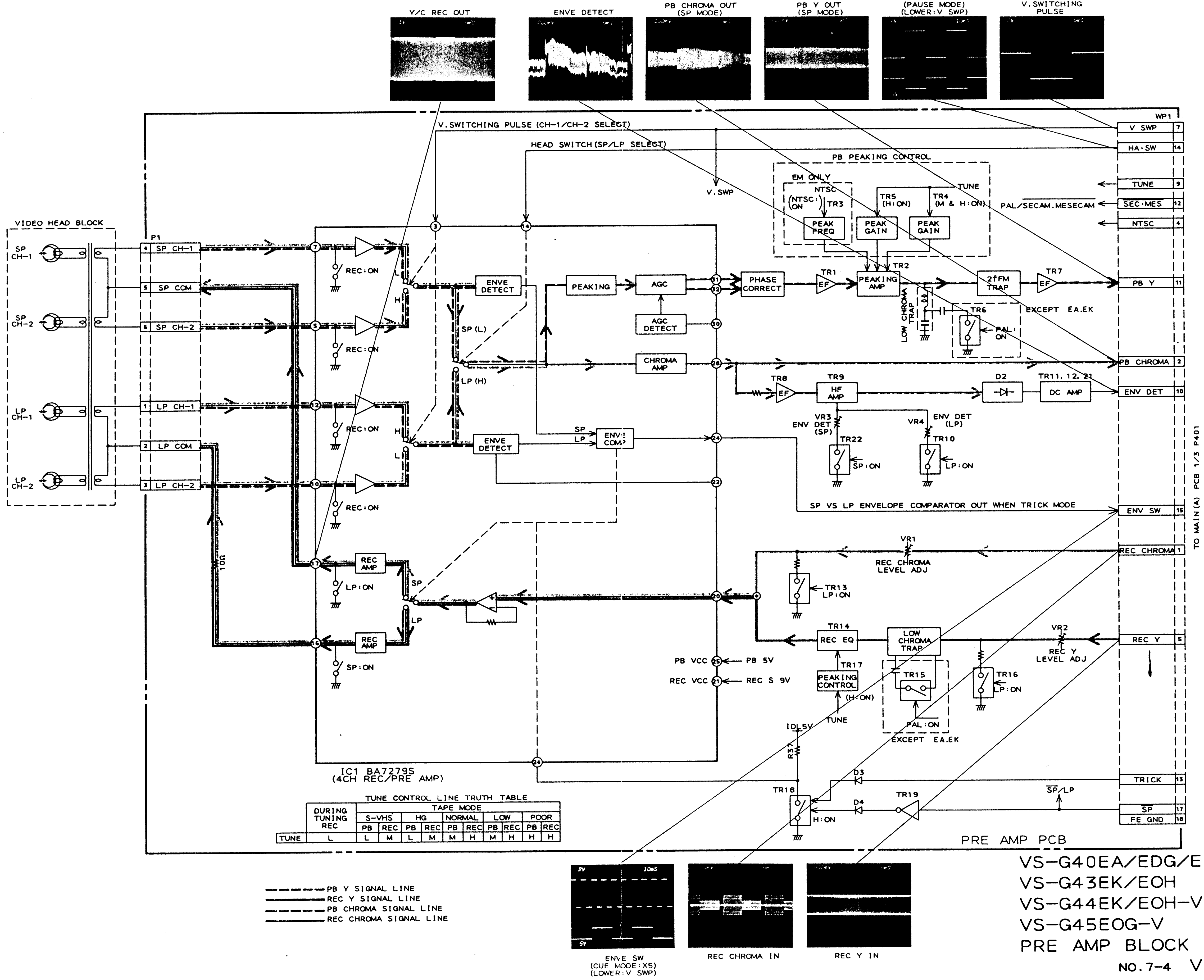
NO.7-2 V116852M A1


EXCEPT VS-G40EK, G43EK
PIN JACK PCB
P5
WP901
F.AUDIO.SW
F.AUDIO
TR901
IC902
MC14066BCP
EXT
AUDIO
PJ1
TR903
EF
BIAS OSC
OSC POWER SUPPLY
TR801
FL801
BIAS OSCILLATOR
VR802
BIAS
LEVEL
FULL
TRACK
ERASE
P802
FULL ERASE
GND
SIDE
TRACK
ERASE
WP801
SIDE ERASE
GND
AUDIO
REC/PB
AUDIO REC
AUDIO PB
IC801 BA7765AS
PB
REC
N.C
VREG
IDL 9V
VCC
VCC
REC 9V
120K
R803-5, C805
PB.EQ
R806
VR801
PB LEVEL
ALC REF LEVEL CONT
REC CTRL
A.REC
START
20dB
2.2K
EQ1
EQ2
HIGH RANGE
REC EQ
A·EE
EE
ALC
36dB
EQ1
EQ1+EQ2
SP/LP
A.MUTE
R814-6, C812-4
TWIN T
fH TRAP
100K
MUTE
0dB
G40EK,
G43EK
ONLY
JS801
TR803
HIGH CUT
EQ
NTSC:ON
EM ONLY
A.EE
A.REC
A.MUTE
SP/LP
A.EE
A.REC
A.MUTE
SP/LP
FROM
SYSCON MI-COM
MAIN (B) PCB
MAIN (A) PCB
JS103
EXCEPT EA, EDG, EM
R135
PJ102
EXCEPT
EA, EDG, EM
A. IN (L)
A. OUT (L)
A. OUT (R)
PJ101
A.OUT
A.IN
EA, EDG, EM
ONLY
R137
C124
EA, EDG, EM, ES
EDI ONLY
AUDIO IN
EXT
TR101
IC101
MC14066BCP
TV.VIDEO OUT
TV AUDIO OUT
VIF
TUNER
RF
CONVERTOR
RF IN
RF OUT
TR103
T.MUTE
(FROM OP MI-COM (56))
IC301
SYSCON MI-COM
A.EE
A.REC
A.MUTE
EXT
SP/LP
PB SIGNAL LINE
REC SIGNAL LINE
A
B
C
D
E
F
G
H
I
J
K
1
2
3
4
5
6
7
8

VS-G40EA/EDG/EK/EM/EO
VS-G43EK/EOH
VS-G44EK/EOH-V
VS-G45E[illegible]-V

AUDIO BLOCK DIAGRAM

NO.7-3 V116853M A2


Y/C REC OUT
ENVE DETECT
PB CHROMA OUT (SP MODE)
PB Y OUT (SP MODE)
HEAD SWITCH (PAUSE MODE) (LOWER:V SWP)
V.SWITCHING PULSE
V.SWITCHING PULSE (CH-1/CH-2 SELECT)
HEAD SWITCH (SP/LP SELECT)
V.SWP
PB PEAKING CONTROL
EM ONLY
NTSC
(NTSC: ON)
TR3
PEAK FREQ
TR5 (H:ON)
TR4 (M & H:ON)
TUNE
PEAK GAIN
PEAK GAIN
VIDEO HEAD BLOCK
SP CH-1
SP CH-2
LP CH-1
LP CH-2
P1
4 SP CH-1
5 SP COM
6 SP CH-2
1 LP CH-1
2 LP COM
3 LP CH-2
REC:ON
REC:ON
REC:ON
REC:ON
H
L
SP (L)
LP (H)
ENVE DETECT
ENVE DETECT
PEAKING
AGC
AGC DETECT
CHROMA AMP
PHASE CORRECT
TR1
EF
PEAKING AMP
TR2
LOW CHROMA TRAP
2fFM TRAP
TR7
EF
TR6
PAL: ON
EXCEPT EA.EK
TR8
EF
TR9
HF AMP
D2
TR11, 12, 21
DC AMP
VR3
ENV DET (SP)
TR22
SP:ON
VR4
ENV DET (LP)
TR10
LP:ON
SP
LP
ENVE COMP
SP VS LP ENVELOPE COMPARATOR OUT WHEN TRICK MODE
10Ω
REC AMP
LP:ON
SP
LP
REC AMP
SP:ON
VR1
REC CHROMA LEVEL ADJ
TR13
LP:ON
TR14
REC EQ
LOW CHROMA TRAP
VR2
REC Y LEVEL ADJ
TR17
PEAKING CONTROL
(H:ON)
TUNE
TR15
PAL:ON
EXCEPT EA.EK
TR16
LP:ON
PB VCC
PB 5V
REC VCC
REC S 9V
IDL5V
R37
D3
D4
TR18
H:ON
TR19
SP/LP
IC1 BA7279S
(4CH REC/PRE AMP)
WP1
V SWP 7
HA·SW 14
TUNE 9
PAL/SECAM.MESECAM
SEC·MES 12
NTSC 4
PB Y 11
PB CHROMA 2
ENV DET 10
ENV SW 15
REC CHROMA 1
REC Y 5
TRICK 13
SP 17
FE GND 18
TO MAIN (A) PCB 1/3 P401
PRE AMP PCB
ENVE SW (CUE MODE:X5) (LOWER:V SWP)
REC CHROMA IN
REC Y IN
2V
10mS
5V
PB Y SIGNAL LINE
REC Y SIGNAL LINE
PB CHROMA SIGNAL LINE
REC CHROMA SIGNAL LINE

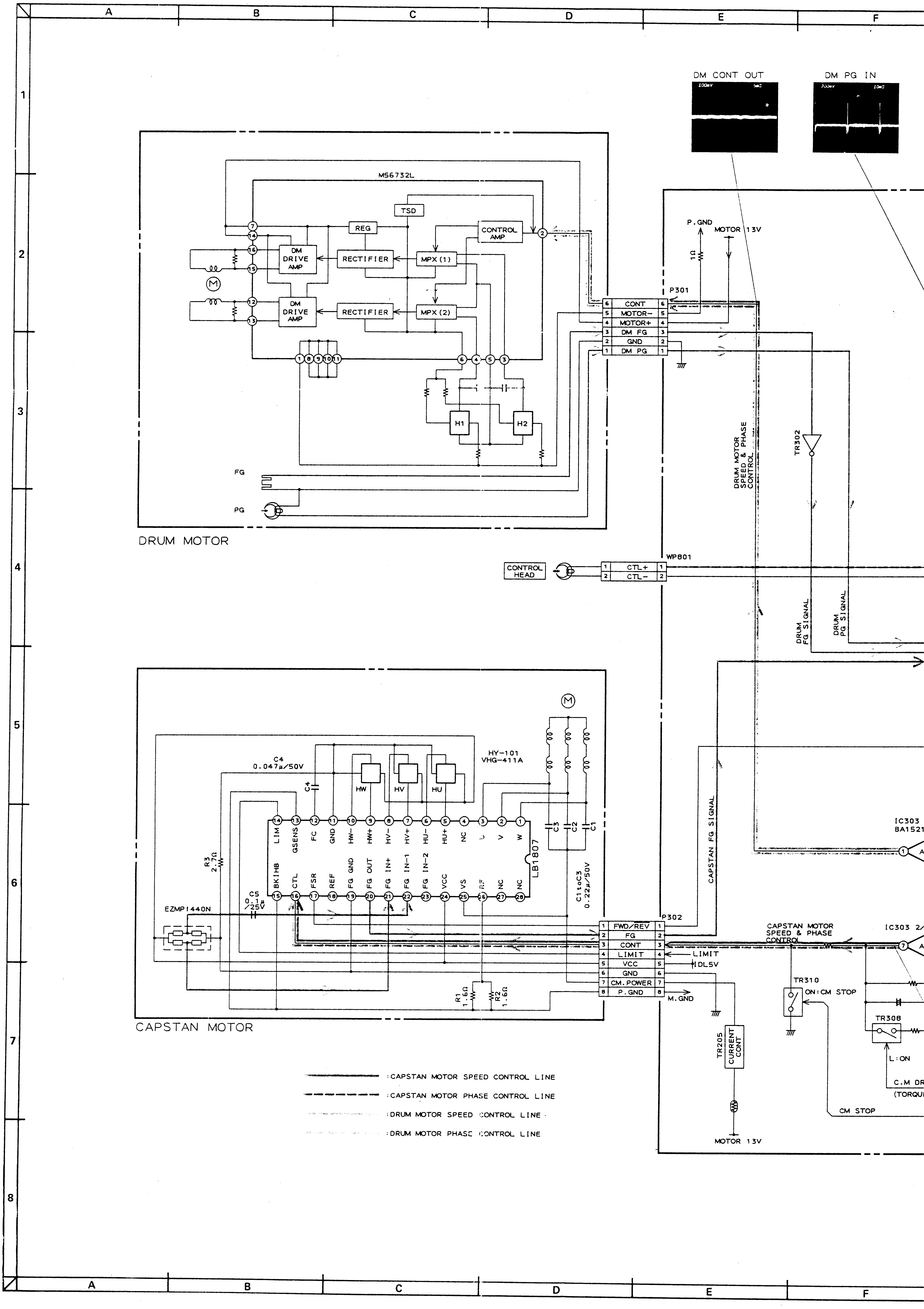
TUNE CONTROL LINE TRUTH TABLE

	DURING TUNING REC	TAPE MODE									
		S-VHS		HG		NORMAL		LOW		POOR	
		PB	REC	PB	REC	PB	REC	PB	REC	PB	REC
TUNE	L	L	M	L	M	M	H	M	H	H	H

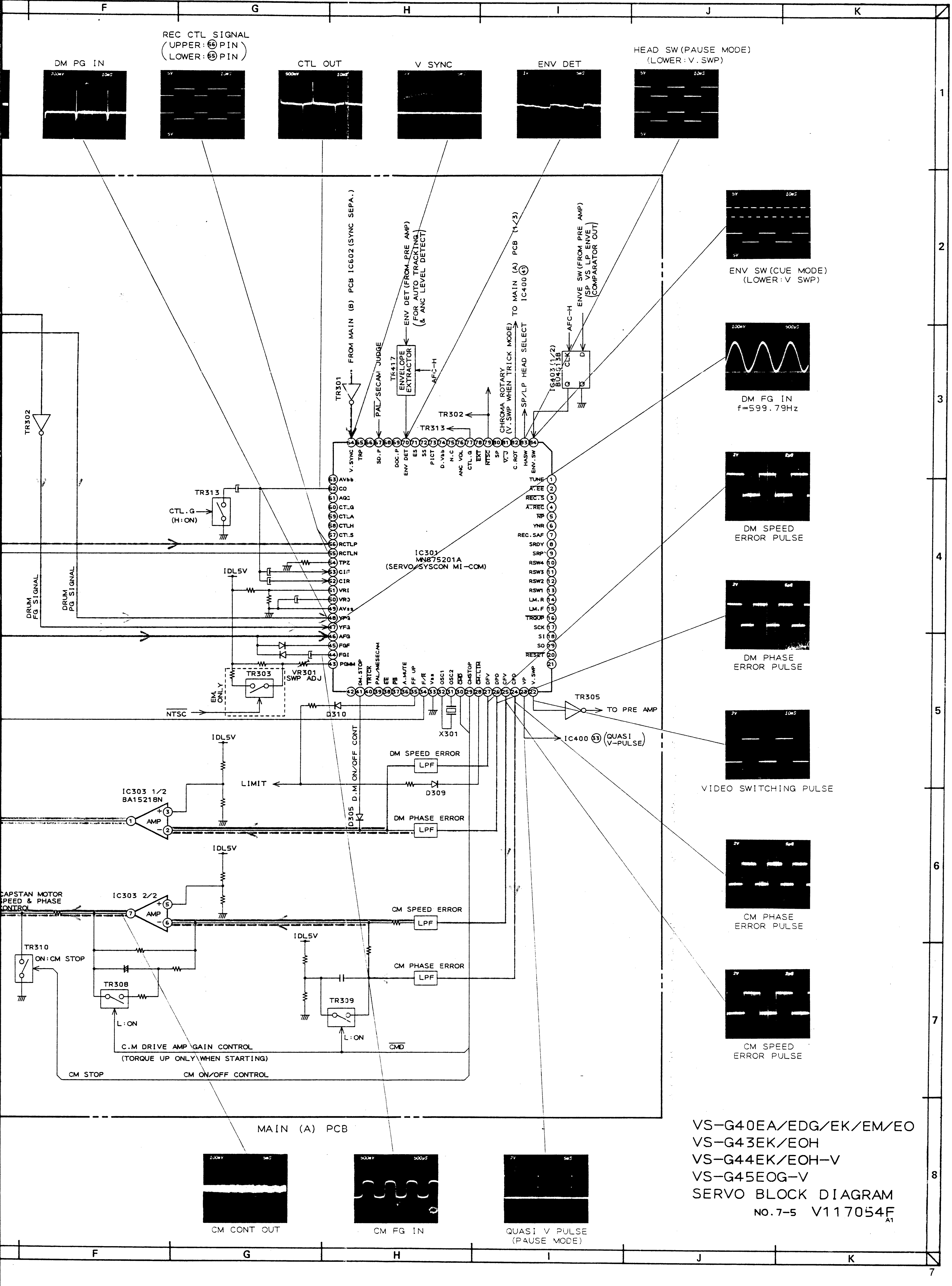
VS-G40EA/EDG/EK/EM/EO
VS-G43EK/EOH
VS-G44EK/EOH-V
VS-G45EOG-V

PRE AMP BLOCK DIAGRAM

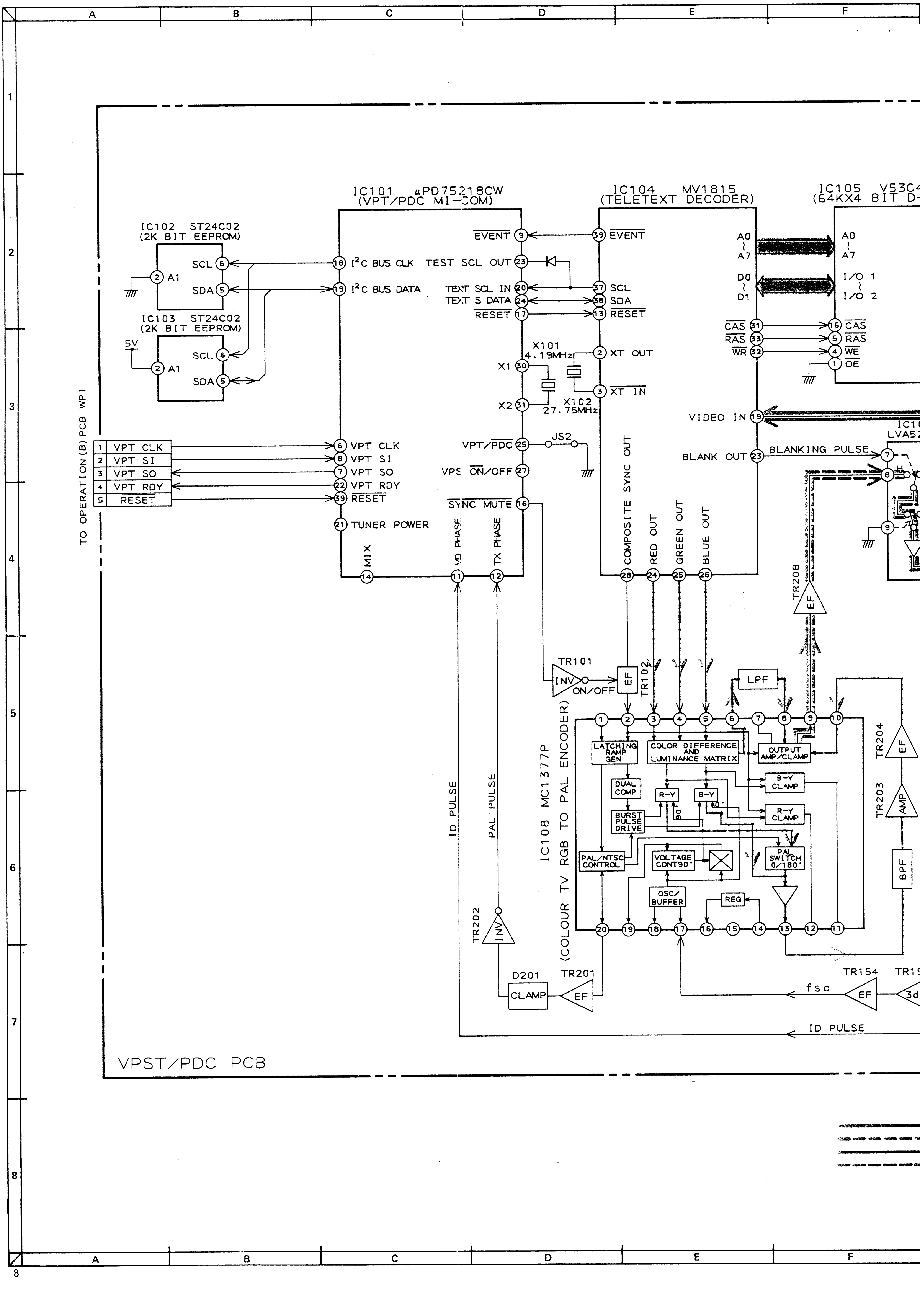
NO.7-4 V117055F A2



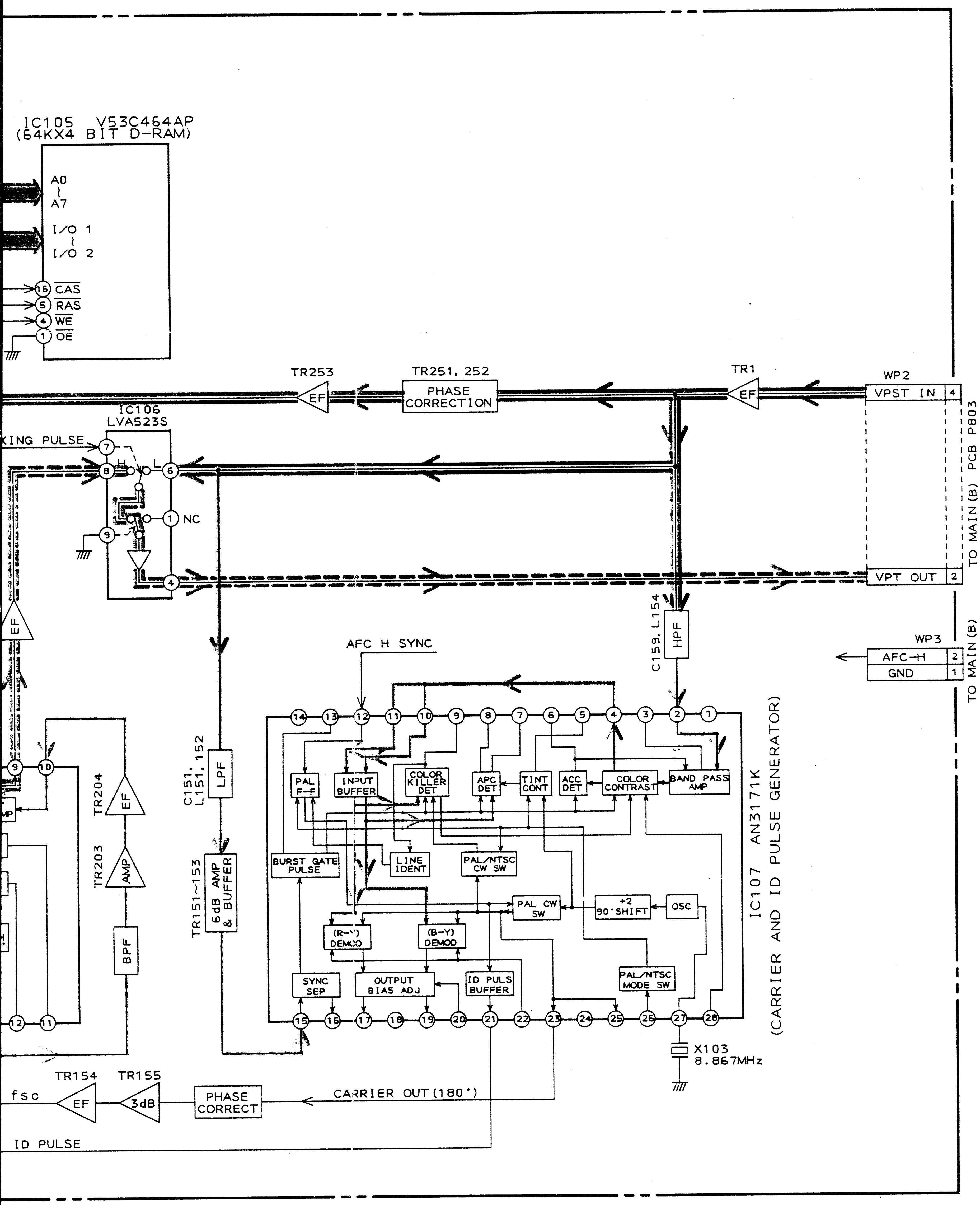
A
B
C
D
E
F
1
2
3
4
5
6
7
8
DM CONT OUT
DM PG IN
M56732L
TSD
REG
CONTROL AMP
DM DRIVE AMP
RECTIFIER
MPX (1)
MPX (2)
H1
H2
FG
PG
DRUM MOTOR
P.GND
MOTOR 13V
1Ω
P301
CONT
MOTOR−
MOTOR+
DM FG
GND
DM PG
DRUM MOTOR SPEED & PHASE CONTROL
TR302
CONTROL HEAD
WP801
CTL+
CTL−
DRUM FG SIGNAL
DRUM PG SIGNAL
CAPSTAN FG SIGNAL
HY-101
VHG-411A
C4
0.047μ/50V
HW
HV
HU
LIM
GSENS
FC
GND
HW−
HW+
HV−
HV+
HU−
HU+
NC
U
V
W
BKIHB
CTL
FSR
REF
FG GND
FG OUT
FG IN+
FG IN−1
FG IN−2
VCC
VS
RF
LB1807
C3
C2
C1
C1 to C3
0.22μ/50V
R3
2.7Ω
C5
0.1μ
/25V
EZMP1440N
R1
1.6Ω
R2
1.6Ω
P302
FWD/REV
FG
CONT
LIMIT
VCC
GND
CM.POWER
P.GND
LIMIT
DL5V
M.GND
CAPSTAN MOTOR
CAPSTAN MOTOR SPEED & PHASE CONTROL
IC303
BA1521
IC303 2/
TR310
ON:CM STOP
TR308
L:ON
C.M DR
(TORQU
CM STOP
TR205
CURRENT CONT
MOTOR 13V
:CAPSTAN MOTOR SPEED CONTROL LINE
:CAPSTAN MOTOR PHASE CONTROL LINE
:DRUM MOTOR SPEED CONTROL LINE
:DRUM MOTOR PHASE CONTROL LINE


F
G
H
I
J
K
REC CTL SIGNAL
(UPPER: 56 PIN)
(LOWER: 55 PIN)
DM PG IN
CTL OUT
V SYNC
ENV DET
HEAD SW (PAUSE MODE)
(LOWER: V. SWP)
ENV SW (CUE MODE)
(LOWER: V SWP)
DM FG IN
f=599.79Hz
DM SPEED
ERROR PULSE
DM PHASE
ERROR PULSE
VIDEO SWITCHING PULSE
CM PHASE
ERROR PULSE
CM SPEED
ERROR PULSE
CM CONT OUT
CM FG IN
QUASI V PULSE
(PAUSE MODE)
1
2
3
4
5
6
7
8
FROM MAIN (B) PCB IC602 (SYNC SEPA.)
TR301
PAL/SECAM JUDGE
TR417
ENVELOPE
EXTRACTOR
AFC-H
ENV DET (FROM PRE AMP)
(FOR AUTO TRACKING)
(& ANC LEVEL DETECT)
TO MAIN (A) PCB (1/3)
IC400 41
CHROMA ROTARY
(V. SWP WHEN TRICK MODE)
SP/LP HEAD SELECT
IC403 (1/2)
BU4013B
AFC-H
CLK
D
Q
ENVE SW (FROM PRE AMP)
(SP VS LP ENVE)
(COMPARATOR OUT)
TR302
TR313
TR302
DRUM FG SIGNAL
DRUM PG SIGNAL
TR313
CTL.G
(H: ON)
IDL5V
IC301
MN675201A
(SERVO/SYSCON MI-COM)
54 V.SYNC
55 TRP
56
57 SD.P
58
59 DOC.P
70 ENV DET
71 ES
72 SS
73 PICT
74 D.Vbb
75 N.C
76 ANC VOL
77 CTL.G
78 EXT
79 NTSC
80 SP
81 V.J
82 C.ROT
83 HASW
84 ENV.SW
63 AVbb
62 CO
61 AGC
60 CTLG
59 CTLA
58 CTLH
57 CTLS
56 RCTLP
55 RCTLN
54 TPZ
53 CIF
52 CIR
51 VRI
50 VRO
49 AVss
48 YFG
47 YFG
46 AFG
45 FGF
44 FGI
43 PGMM
TUNE 1
A.EE 2
REC.S 3
A.REC 4
NP 5
YNR 6
REC.SAF 7
SRDY 8
SRP 9
RSW4 10
RSW3 11
RSW2 12
RSW1 13
LM.R 14
LM.F 15
TRQUP 16
SCK 17
SI 18
SO 19
RESET 20
21
42
41 DM.STOP
40 TRICK
39 PAL/MESECAM
38 EE
37 PB
36 A.MUTE
35 FF UP
34 F/R
33 Vss
32 OSC1
31 OSC2
30 CMD
29 CMSTOP
28 CM.LTM
27 DFV
26 DPD
25 CFV
24 CPD
23 VP
22 V.SWP
TR303
VR301
SWP ADJ
EM ONLY
NTSC
D310
X301
TR305
TO PRE AMP
IC400 33 (QUASI V-PULSE)
IDL5V
D.M ON/OFF CONT
DM SPEED ERROR
LPF
LIMIT
D309
IC303 1/2
BA15218N
AMP
+3
-2
1
D305
DM PHASE ERROR
LPF
IDL5V
CAPSTAN MOTOR
SPEED & PHASE
CONTROL
IC303 2/2
+5
-6
7
AMP
CM SPEED ERROR
LPF
IDL5V
TR310
ON: CM STOP
TR308
L: ON
CM PHASE ERROR
LPF
TR309
L: ON
C.M DRIVE AMP GAIN CONTROL
(TORQUE UP ONLY WHEN STARTING)
CMD
CM STOP
CM ON/OFF CONTROL
MAIN (A) PCB

VS-G40EA/EDG/EK/EM/EO
VS-G43EK/EOH
VS-G44EK/EOH-V
VS-G45EOG-V
SERVO BLOCK DIAGRAM
NO.7-5 V117054F A1

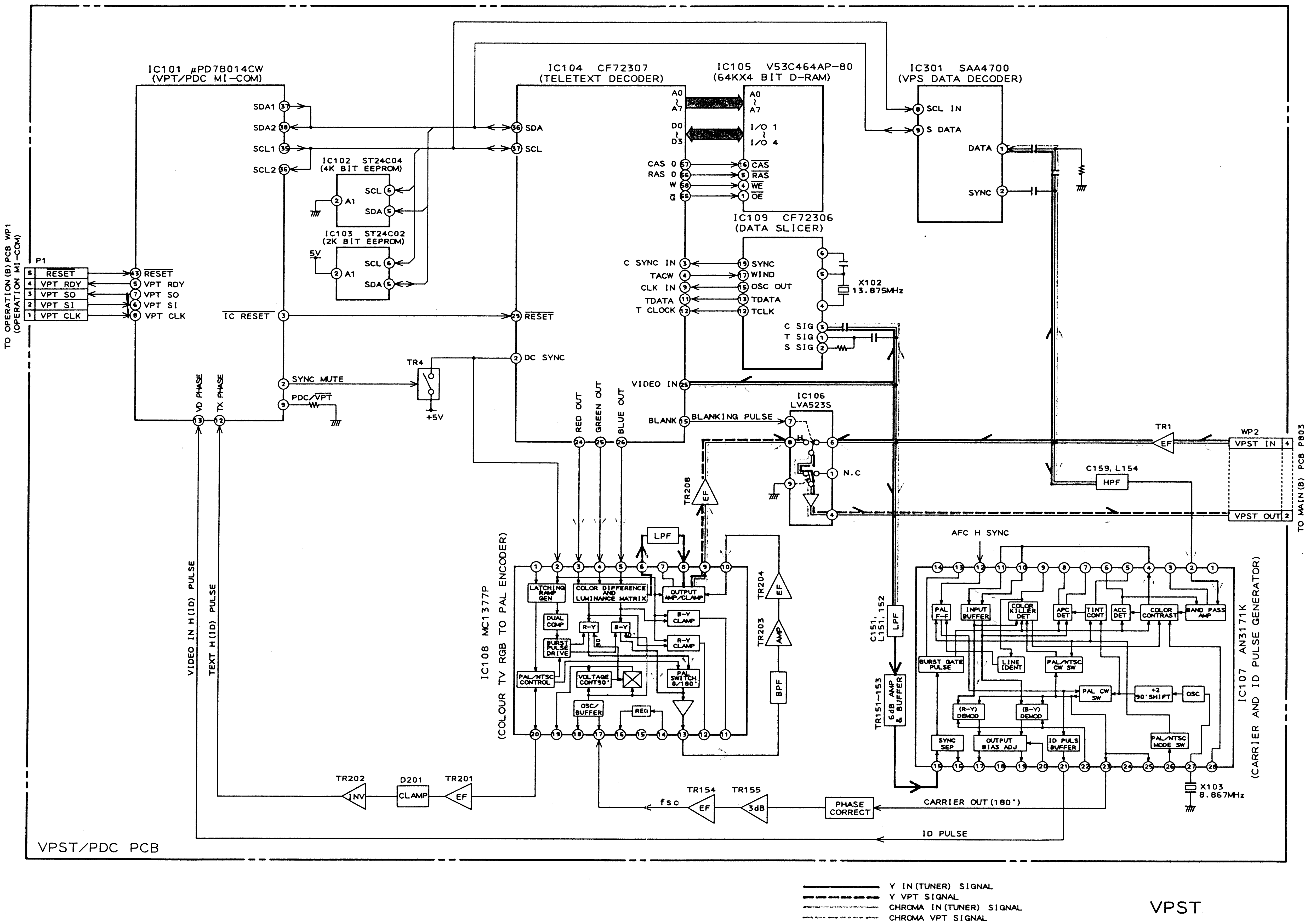


A
B
C
D
E
F
1
2
3
4
5
6
7
8
IC101 µPD75218CW
(VPT/PDC MI-COM)
IC102 ST24C02
(2K BIT EEPROM)
IC103 ST24C02
(2K BIT EEPROM)
IC104 MV1815
(TELETEXT DECODER)
IC105 V53C4
(64KX4 BIT D-
SCL
SDA
A1
5V
I²C BUS CLK
I²C BUS DATA
TEST SCL OUT
TEXT SCL IN
TEXT S DATA
RESET
EVENT
X101
4.19MHz
X102
27.75MHz
X1
X2
XT OUT
XT IN
A0 ~ A7
D0 ~ D1
I/O 1 ~ I/O 2
CAS
RAS
WR
WE
OE
VIDEO IN
BLANK OUT
BLANKING PULSE
IC10
LVA52
TO OPERATION (B) PCB WP1
VPT CLK
VPT SI
VPT SO
VPT RDY
RESET
VPT/PDC
JS2
VPS ON/OFF
SYNC MUTE
TUNER POWER
MIX
VD PHASE
TX PHASE
COMPOSITE SYNC OUT
RED OUT
GREEN OUT
BLUE OUT
TR101
INV
ON/OFF
EF
TR102
TR208
LPF
IC108 MC1377P
(COLOUR TV RGB TO PAL ENCODER)
LATCHING RAMP GEN
COLOR DIFFERENCE AND LUMINANCE MATRIX
OUTPUT AMP/CLAMP
DUAL COMP
R-Y
B-Y
90
0°
B-Y CLAMP
R-Y CLAMP
BURST PULSE DRIVE
PAL/NTSC CONTROL
VOLTAGE CONT90°
PAL SWITCH 0/180°
OSC/BUFFER
REG
TR204
TR203
AMP
BPF
ID PULSE
PAL PULSE
TR202
D201
CLAMP
TR201
TR154
TR15
fsc
3d
VPST/PDC PCB

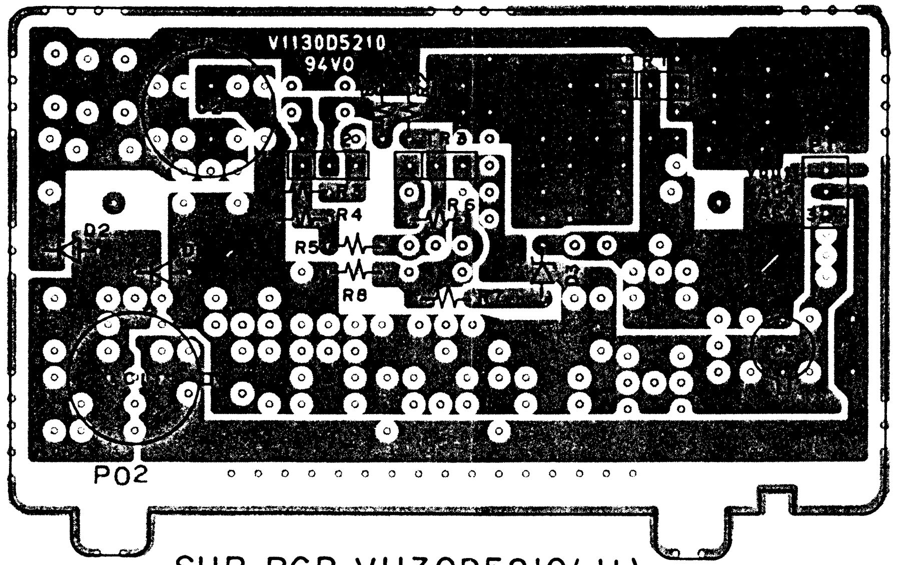

IC105 V53C464AP
(64KX4 BIT D-RAM)
A0 ~ A7
I/O 1 ~ I/O 2
16 CAS
5 RAS
4 WE
1 OE
TR253
EF
TR251, 252
PHASE CORRECTION
TR1
EF
WP2
VPST IN 4
VPT OUT 2
TO MAIN (B) PCB P803
IC106
LVA523S
KING PULSE
7
8
H
L
6
1 NC
9
4
EF
C159, L154
HPF
WP3
AFC-H 2
GND 1
TO MAIN (B) PCB P601
AFC H SYNC
14 13 12 11 10 9 8 7 6 5 4 3 2 1
PAL F-F
INPUT BUFFER
COLOR KILLER DET
APC DET
TINT CONT
ACC DET
COLOR CONTRAST
BAND PASS AMP
BURST GATE PULSE
LINE IDENT
PAL/NTSC CW SW
PAL CW SW
÷2 90° SHIFT
OSC
(R-Y) DEMOD
(B-Y) DEMOD
SYNC SEP
OUTPUT BIAS ADJ
ID PULS BUFFER
PAL/NTSC MODE SW
15 16 17 18 19 20 21 22 23 24 25 26 27 28
IC107 AN3171K
(CARRIER AND ID PULSE GENERATOR)
X103
8.867MHz
C151, L151, 152
LPF
TR151~153
6dB AMP & BUFFER
TR204
EF
TR203
AMP
BPF
9 10
12 11
TR154
TR155
fsc
EF
3dB
PHASE CORRECT
CARRIER OUT (180°)
ID PULSE

▬▬ Y IN (TUNER) SIGNAL
▬ ▬ Y VPT SIGNAL
━━ CHROMA IN (TUNER) SIGNAL
━ ━ CHROMA VPT SIGNAL

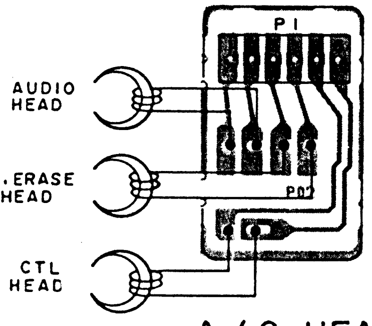
PDC
BLOCK DIAGRAM
NO. 7-6 V117056F A2


IC101 μPD78014CW
(VPT/PDC MI-COM)
SDA1 37
SDA2 38
SCL1 35
SCL2 36
IC102 ST24C04
(4K BIT EEPROM)
A1 2
SCL 6
SDA 5
IC103 ST24C02
(2K BIT EEPROM)
5V
IC104 CF72307
(TELETEXT DECODER)
SDA 36
SCL 37
A0 ~ A7
D0 ~ D3
CAS 0 57
RAS 0 56
W 58
G 55
IC105 V53C464AP-80
(64KX4 BIT D-RAM)
A0 ~ A7
I/O 1 ~ I/O 4
CAS
RAS
WE
OE
IC109 CF72306
(DATA SLICER)
C SYNC IN 3
TACW 4
CLK IN 9
TDATA 11
T CLOCK 12
SYNC 19
WIND 17
OSC OUT 15
TDATA 13
TCLK 12
C SIG 3
T SIG 1
S SIG 2
X102 13.875MHz
IC301 SAA4700
(VPS DATA DECODER)
SCL IN 8
S DATA 9
DATA 1
SYNC 2
TO OPERATION (B) PCB WP1
(OPERATION MI-COM)
P1
5 RESET
4 VPT RDY
3 VPT SO
2 VPT SI
1 VPT CLK
43 RESET
5 VPT RDY
7 VPT SO
6 VPT SI
8 VPT CLK
IC RESET 3
29 RESET
2 DC SYNC
SYNC MUTE 2
PDC/VPT 9
TR4
+5V
VD PHASE 13
TX PHASE 12
VIDEO IN 26
BLANK 15
RED OUT 24
GREEN OUT 25
BLUE OUT 26
BLANKING PULSE
IC106 LVA523S
7 8 6 1 9 4
H
N.C
TR208 EF
TR1 EF
WP2
VPST IN 4
VPST OUT 2
TO MAIN (B) PCB P803
C159, L154 HPF
LPF
IC108 MC1377P
(COLOUR TV RGB TO PAL ENCODER)
LATCHING RAMP GEN
COLOR DIFFERENCE AND LUMINANCE MATRIX
OUTPUT AMP/CLAMP
DUAL COMP
BURST PULSE DRIVE
R-Y
B-Y
B-Y CLAMP
R-Y CLAMP
PAL/NTSC CONTROL
VOLTAGE CONT90°
PAL SWITCH 0/180°
OSC/BUFFER
REG
TR204 EF
TR203 AMP
BPF
VIDEO IN H(ID) PULSE
TEXT H(ID) PULSE
TR202 INV
D201 CLAMP
TR201 EF
fsc
TR154 EF
TR155 3dB
PHASE CORRECT
CARRIER OUT (180°)
ID PULSE
C151, L151, 152 LPF
TR151~153 6dB AMP & BUFFER
AFC H SYNC
IC107 AN3171K
(CARRIER AND ID PULSE GENERATOR)
PAL F-F
INPUT BUFFER
COLOR KILLER DET
APC DET
TINT CONT
ACC DET
COLOR CONTRAST
BAND PASS AMP
BURST GATE PULSE
LINE IDENT
PAL/NTSC CW SW
PAL CW SW
÷2 90°SHIFT
OSC
(R-Y) DEMOD
(B-Y) DEMOD
SYNC SEP
OUTPUT BIAS ADJ
ID PULS BUFFER
PAL/NTSC MODE SW
X103 8.867MHz
VPST/PDC PCB
Y IN (TUNER) SIGNAL
Y VPT SIGNAL
CHROMA IN (TUNER) SIGNAL
CHROMA VPT SIGNAL

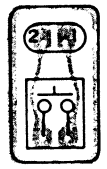
VPST
BLOCK DIAGRAM
NO. 7-7 V116854M A2


V1130D5210
94V0
D2
R4
R5
R6
R8
P02

SUB PCB V1130D5210(J1)
(EM ONLY)

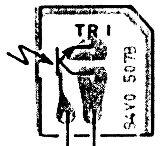

P1
AUDIO HEAD
S.ERASE HEAD
CTL HEAD
P01

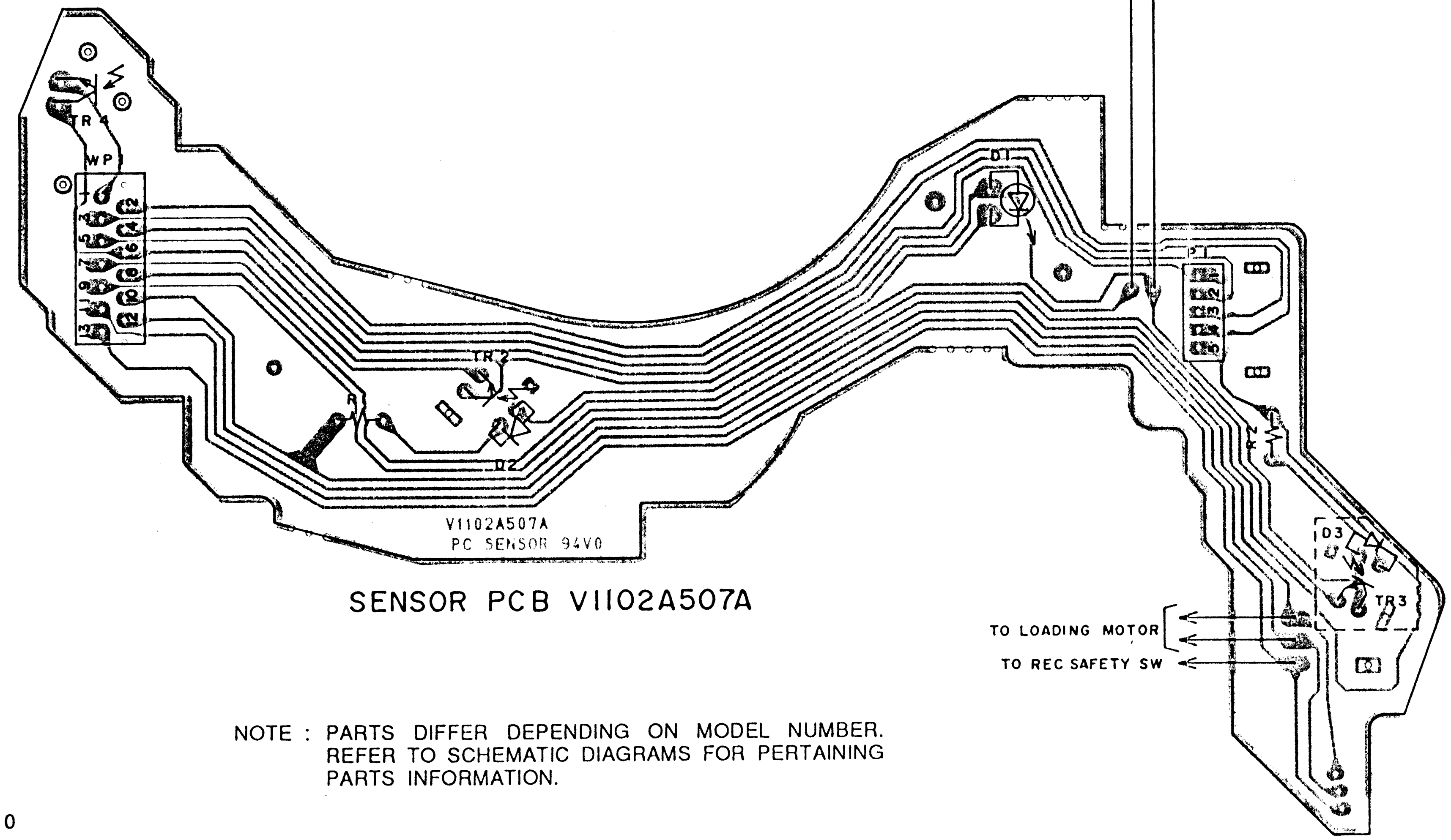
A/C HEAD PCB
V1102B5120(J1)



S-SWITCH PCB
V1154C5180

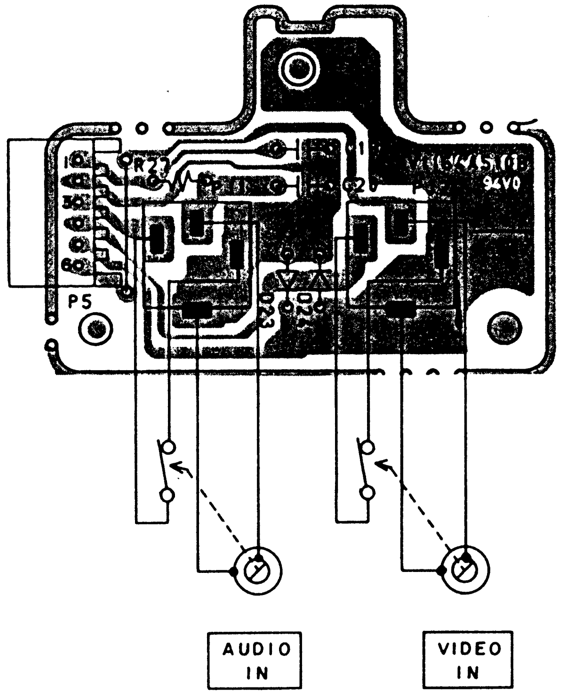
SENSOR(S) PCB
V1102A507B


TR1
94V0 507B

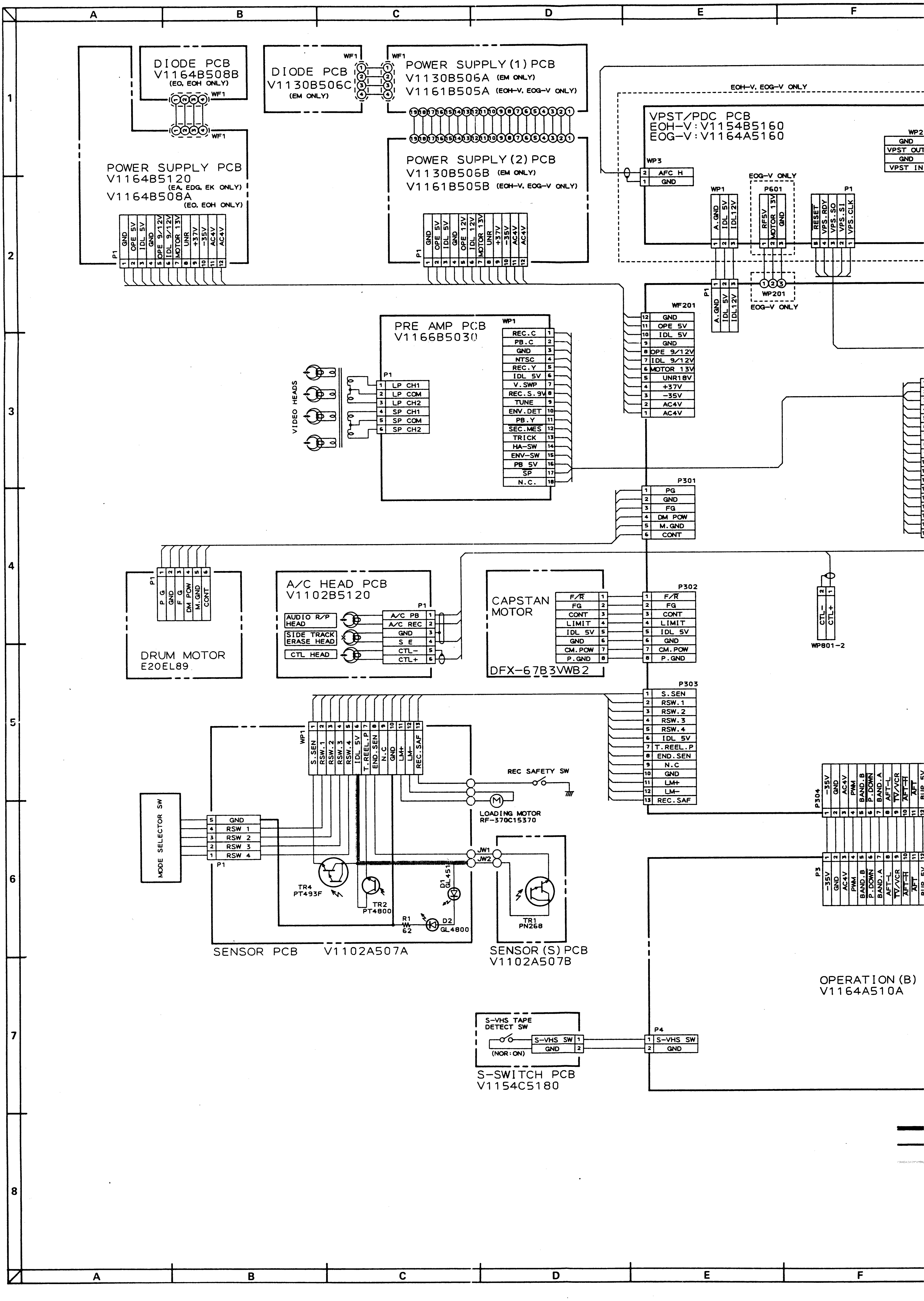

TR4
WP1
D1
TR2
R1
D2
P1
D3
TR3
V1102A507A
PC SENSOR 94V0
TO LOADING MOTOR
TO REC SAFETY SW

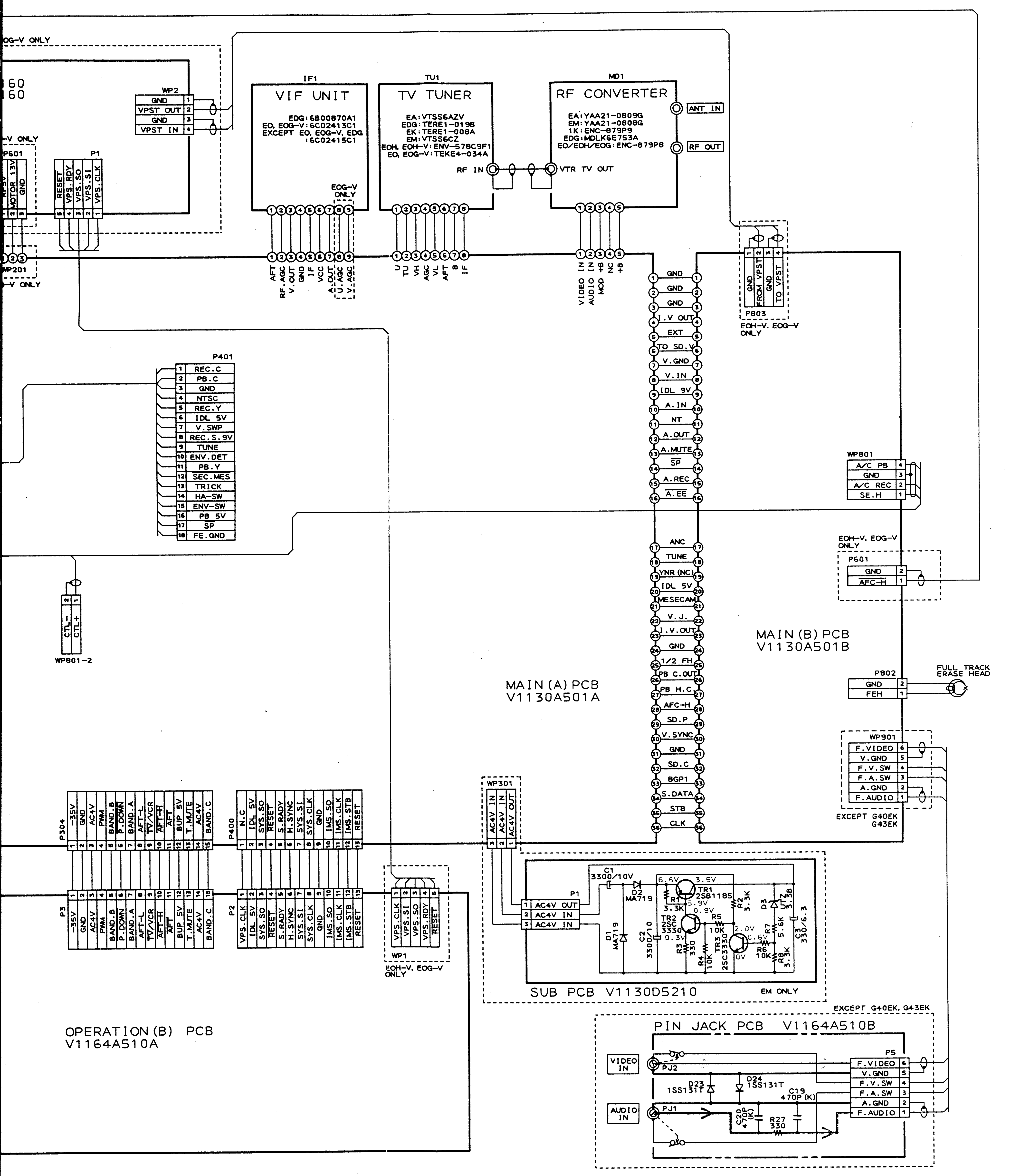
SENSOR PCB V1102A507A

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER.
REFER TO SCHEMATIC DIAGRAMS FOR PERTAINING
PARTS INFORMATION.


P5
R27
94V0
AUDIO IN
VIDEO IN

PIN JACK PCB V1164A510B
(EXCEPT G40EK,G43EK)

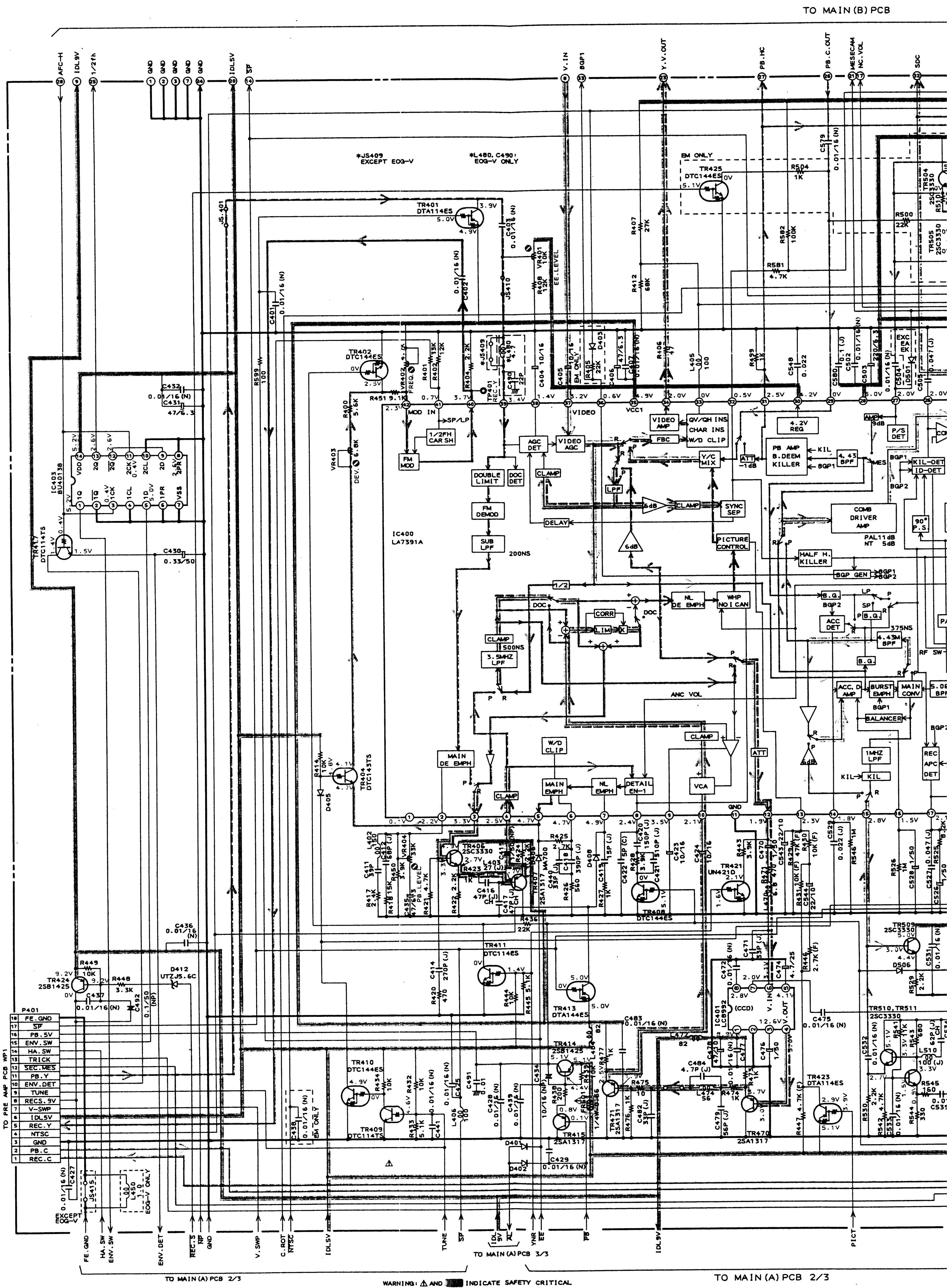

A
B
C
D
E
F
1
2
3
4
5
6
7
8
DIODE PCB
V1164B508B
(EO, EOH ONLY)
WF1
DIODE PCB
V1130B506C
(EM ONLY)
WF1
POWER SUPPLY (1) PCB
V1130B506A (EM ONLY)
V1161B505A (EOH-V, EOG-V ONLY)
POWER SUPPLY (2) PCB
V1130B506B (EM ONLY)
V1161B505B (EOH-V, EOG-V ONLY)
POWER SUPPLY PCB
V1164B5120
(EA, EDG, EK ONLY)
V1164B508A
(EO, EOH ONLY)
P1
GND
OPE 5V
IDL 5V
GND
OPE 9/12V
IDL 9/12V
MOTOR 13V
UNR
+37V
-35V
AC4V
AC4V
GND
OPE 5V
IDL 5V
GND
OPE 12V
IDL 12V
MOTOR 13V
UNR
+37V
-35V
AC4V
AC4V
EOH-V, EOG-V ONLY
VPST/PDC PCB
EOH-V : V1154B5160
EOG-V : V1164A5160
WP2
GND
VPST OUT
GND
VPST IN
WP3
AFC H
GND
EOG-V ONLY
WP1
A.GND
IDL 5V
IDL12V
P601
RF5V
MOTOR 13V
GND
P1
RESET
VPS.RDY
VPS.SO
VPS.SI
VPS.CLK
WP201
EOG-V ONLY
WF201
GND
OPE 5V
IDL 5V
GND
OPE 9/12V
IDL 9/12V
MOTOR 13V
UNR18V
+37V
-35V
AC4V
AC4V
PRE AMP PCB
V1166B5030
WP1
REC.C
PB.C
GND
NTSC
REC.Y
IDL 5V
V.SWP
REC.S.9V
TUNE
ENV.DET
PB.Y
SEC.MES
TRICK
HA-SW
ENV-SW
PB 5V
SP
N.C.
VIDEO HEADS
P1
LP CH1
LP COM
LP CH2
SP CH1
SP COM
SP CH2
P301
PG
GND
FG
DM POW
M.GND
CONT
DRUM MOTOR
E20EL89
P G
GND
F G
DM POW
M.GND
CONT
A/C HEAD PCB
V1102B5120
AUDIO R/P HEAD
SIDE TRACK ERASE HEAD
CTL HEAD
A/C PB
A/C REC
GND
S E
CTL-
CTL+
CAPSTAN MOTOR
DFX-67B3VWB2
F/R
FG
CONT
LIMIT
IDL 5V
GND
CM.POW
P.GND
P302
F/R
FG
CONT
LIMIT
IDL 5V
GND
CM.POW
P.GND
CTL-
CTL+
WP801-2
P303
S.SEN
RSW.1
RSW.2
RSW.3
RSW.4
IDL 5V
T.REEL.P
END.SEN
N.C
GND
LM+
LM-
REC.SAF
WP1
S.SEN
RSW.1
RSW.2
RSW.3
RSW.4
IDL 5V
T.REEL.P
END.SEN
N.C
GND
LM+
LM-
REC.SAF
REC SAFETY SW
LOADING MOTOR
RF-370C15370
MODE SELECTOR SW
P1
GND
RSW 1
RSW 2
RSW 3
RSW 4
JW1
JW2
TR4
PT493F
TR2
PT4800
D1
GL451
R1
62
D2
GL4800
TR1
PN268
SENSOR PCB V1102A507A
SENSOR (S) PCB
V1102A507B
P304
-35V
GND
AC4V
PWM
BAND.B
P.DOWN
BAND.A
AFT-L
TV/VCR
AFT-H
AFT
P3
-35V
GND
AC4V
PWM
BAND.B
P.DOWN
BAND.A
AFT-L
TV/VCR
AFT-H
AFT
OPERATION (B)
V1164A510A
S-VHS TAPE DETECT SW
S-VHS SW
GND
(NOR : ON)
S-SWITCH PCB
V1154C5180
P4
S-VHS SW
GND


OG-V ONLY
60
60
WP2
GND
VPST OUT
GND
VPST IN
-V ONLY
P601
MOTOR 13V
GND
P1
RESET
VPS.RDY
VPS.SO
VPS.SI
VPS.CLK
WP201
-V ONLY
IF1
VIF UNIT
EDG:6800870A1
EO, EOG-V:6C02413C1
EXCEPT EO, EOG-V, EDG :6C02415C1
EOG-V ONLY
AFT
RF.AGC
V.OUT
GND
IF
VCC
A.OUT
U.AGC
V.AGC
TU1
TV TUNER
EA:VTSS6AZV
EDG:TERE1-019B
EK:TERE1-008A
EM:VTSS6CZ
EOH, EOH-V:ENV-578C9F1
EO, EOG-V:TEKE4-034A
RF IN
U
TU
VH
AGC
VL
AFT
B
IF
MD1
RF CONVERTER
EA:YAA21-0809G
EM:YAA21-0808G
1K:ENC-879P9
EDG:MDLK6E753A
EO/EOH/EOG:ENC-879P8
ANT IN
RF OUT
VTR TV OUT
VIDEO IN
AUDIO IN
MOD +B
NC
+B
GND
GND
GND
I.V OUT
EXT
TO SD.V
V.GND
V.IN
IDL 9V
A.IN
NT
A.OUT
A.MUTE
SP
A.REC
A.EE
ANC
TUNE
YNR (NC)
IDL 5V
MESECAM
V.J.
I.V.OUT
GND
1/2 FH
PB C.OUT
PB H.C
AFC-H
SD.P
V.SYNC
GND
SD.C
BGP1
S.DATA
STB
CLK
GND
FROM VPST
GND
TO VPST
P803
EOH-V, EOG-V ONLY
P401
REC.C
PB.C
GND
NTSC
REC.Y
IDL 5V
V.SWP
REC.S.9V
TUNE
ENV.DET
PB.Y
SEC.MES
TRICK
HA-SW
ENV-SW
PB 5V
SP
FE.GND
WP801
A/C PB
GND
A/C REC
SE.H
EOH-V, EOG-V ONLY
P601
GND
AFC-H
CTL-
CTL+
WP801-2
MAIN (B) PCB
V1130A501B
MAIN (A) PCB
V1130A501A
P802
GND
FEH
FULL TRACK ERASE HEAD
WP901
F.VIDEO
V.GND
F.V.SW
F.A.SW
A.GND
F.AUDIO
EXCEPT G40EK G43EK
P304
-35V
GND
AC4V
PWM
BAND.B
P.DOWN
BAND.A
AFT-L
TV/VCR
AFT-H
AFT
BUP 5V
T.MUTE
AC4V
BAND.C
P400
N.C
IDL 5V
SYS.SO
RESET
S.RADY
H.SYNC
SYS.SI
SYS.CLK
GND
IMS.SO
IMS.CLK
IMS.STB
RESET
P3
-35V
GND
AC4V
PWM
BAND.B
P.DOWN
BAND.A
AFT-L
TV/VCR
AFT-H
AFT
BUP 5V
T.MUTE
AC4V
BAND.C
P2
VPS.CLK
IDL 5V
SYS.SO
RESET
S.RADY
H.SYNC
SYS.SI
SYS.CLK
GND
IMS.SO
IMS.CLK
IMS.STB
RESET
WP1
VPS.CLK
VPS.SI
VPS.SO
VPS.RDY
RESET
EOH-V, EOG-V ONLY
WP301
AC4V IN
AC4V IN
AC4V OUT
P1
AC4V OUT
AC4V IN
AC4V IN
C1
3300/10V
D2
MA719
6.6V
3.5V
TR1
2SB1185
R1
3.3K
5.9V
0.9V
R2
3.3K
D3
UTZ 3.3B
TR2
2SC 3330
0.3V
R5
10K
2.0V
0.6V
R7
5.6K
C3
330/6.3
D1
MA719
C2
3300/10
R3
330
R4
10K
TR3
2SC3330
0V
R6
10K
R8
3.3K
SUB PCB V1130D5210
EM ONLY
OPERATION (B) PCB
V1164A510A
EXCEPT G40EK, G43EK
PIN JACK PCB V1164A510B
VIDEO IN
PJ2
AUDIO IN
PJ1
D23
1SS131T
D24
1SS131T
C19
470P (K)
C20
470P (K)
R27
330
P5
F.VIDEO
V.GND
F.V.SW
F.A.SW
A.GND
F.AUDIO
B (POWER SUPPLY) LINE
AUDIO IN SIGNAL LINE
VIDEO IN SIGNAL LINE

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN µF50 WV (K)
ALL INDUCTORS IN µH (K)

INDICATED VOLTAGE IN THE SUB PCB WERE MEASURED IN PB MODE.
(CONNECTED DC VOLTMETER'S GROUND TO THE P1 ③ PIN WHEN MEASURED)

VS-G40EA/EDG/EK/EM/EO
VS-G43EK/EOH
VS-G44EK/EOH-V
VS-G45EOG-V
CONNECTION DIAGRAM
NO.19-1 V116801M A1

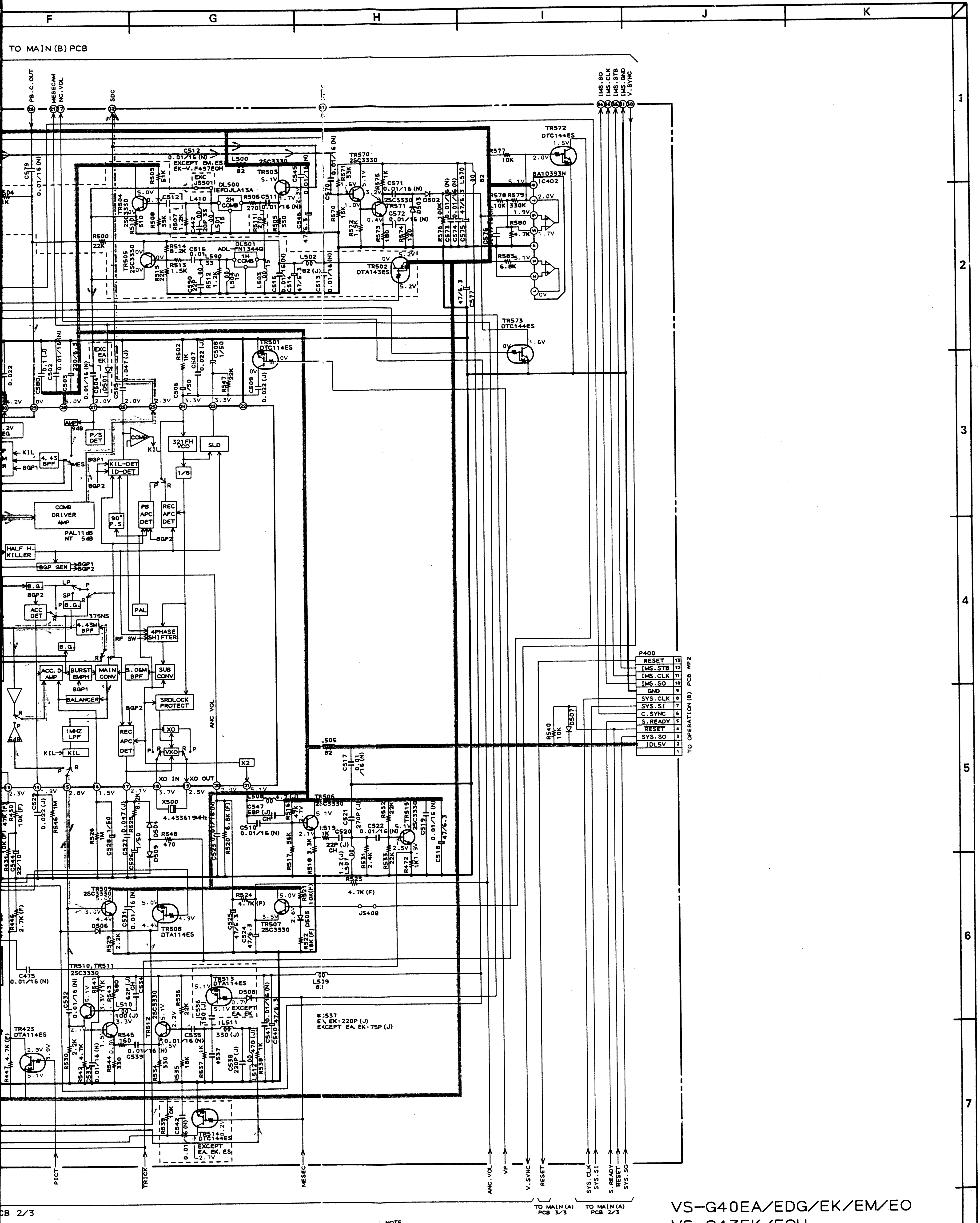

TO MAIN (B) PCB
AFC-H
IDL9V
1/2fh
GND
IDL5V
SP
V.IN
BGP1
Y.V.OUT
PB.HC
PB.C.OUT
MESECAM NC.VOL
SDC
*JS409 EXCEPT EOG-V
*L480, C490: EOG-V ONLY
EM ONLY
IC403 BU4013B
IC400 LA7391A
IC401 LC8992 (CCD)
P401
TO PRE AMP PCB WP1
FE.GND
HA.SW
ENV.SW
ENV.DET
REC.S
NP
V.SWP
C.ROT
NTSC
TUNE
IDL 9V
AL
YNR
EE
PB
PICT
TO MAIN (A) PCB 3/3
TO MAIN (A) PCB 2/3
TO MAIN (A) PCB 2/3

MAIN (A) PCB V1130A501A

WARNING: ⚠ AND ▨ INDICATE SAFETY CRITICAL
COMPONENTS FOR CONTINUED SAFETY.
REPLACE SAFETY CRITICAL COMPONENTS
ONLY WITH MANUFACTURER'S RECOMMENDED
PARTS

AVERTISSMENT: ⚠ ET ▨, ILS INDIQUENT LES
COMPOSTANTS CRITIQUES DE SÉCURITÉ.
POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ
DE L'APPAREIL, NE REMPLACER QUE DES
PIÈCES RECOMMANDEES PAR LE FABRICANT

INDICATED VOLTAGES WERE
MEASURED DURING PB MODE.
(TAPE SPEED: SP)
(PLAYING BACK PAL RECODED

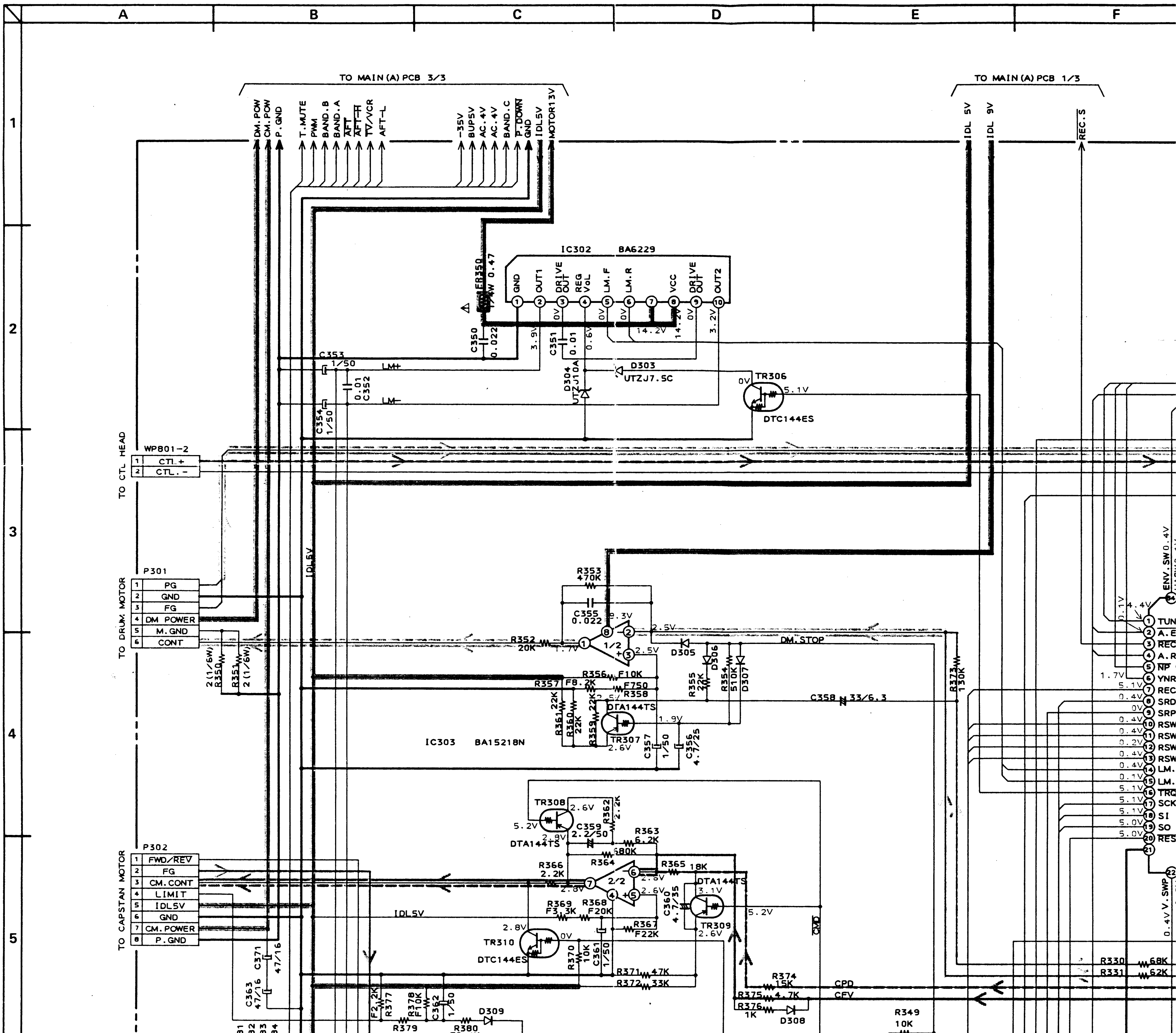

F
G
H
I
J
K
1
2
3
4
5
6
7
8
TO MAIN (B) PCB
PB.C.OUT
MESECAM
NC.VOL
SDC
IMS.SO
IMS.CLK
IMS.STB
IMS.GND
V.SYNC
TR572
DTC144ES
TR570
2SC3330
TR503
TR504
2SC3330
TR505
2SC3330
DL500
1EFDJLA13A
DL501
ADL-FN1544Q
2H COMB
1H COMB
TR502
DTA143ES
BA10393N
IC402
TR573
DTC144ES
TR501
DTC114ES
321FH VCO
SLD
COMP
P/S DET
KIL-DET
ID-DET
COMB DRIVER AMP
PAL11dB
NT 5dB
HALF H. KILLER
BGP GEN
B.G.
ACC DET
4.43M BPF
4PHASE SHIFTER
ACC. D AMP
BURST EMPH
MAIN CONV
5.06M BPF
SUB CONV
BALANCER
3RDLOCK PROTECT
1MHZ LPF
KIL
REC APC DET
PB APC DET
REC AFC DET
90° P.S
XO
VXO
X2
X500
4.433619MHz
ANC.VOL
P400
RESET
IMS.STB
IMS.CLK
IMS.SO
GND
SYS.CLK
SYS.SI
C.SYNC
S.READY
RESET
SYS.SO
IDL5V
TO OPERATION (B) PCB WP2
TR506
2SC3330
TR515
2SC3330
TR509
2SC3330
TR508
DTA114ES
TR507
2SC3330
TR510, TR511
2SC3330
TR513
DTA114ES
TR512
2SC3330
TR423
DTA114ES
TR514
DTC144ES
EXCEPT EA, EK, ES
*:537
EA, EK: 220P (J)
EXCEPT EA, EK: 75P (J)
PICT
TRICK
MESEC
ANC.VOL
VP
V.SYNC
RESET
SYS.CLK
SYS.SI
S.READY
RESET
SYS.SO
TO MAIN (A) PCB 3/3
TO MAIN (A) PCB 2/3
CB 2/3

INDICATED VOLTAGES WERE
MEASURED DURING PB MODE.
(TAPE SPEED: SP)
(PLAYING BACK PAL RECODED TAPE)

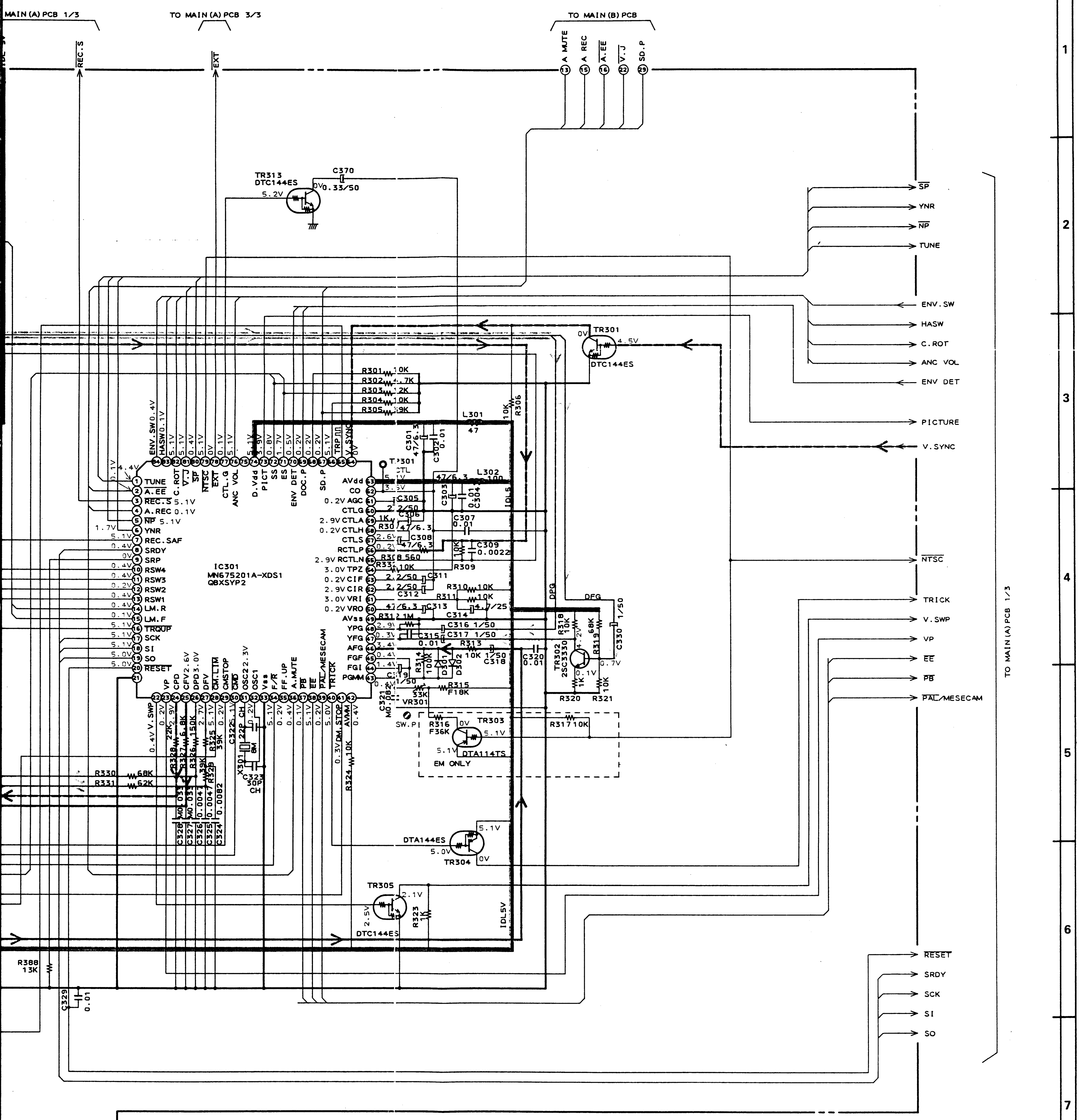
B (POWER SUPPLY) LINE
PB Y SIGNAL LINE
REC Y SIGNAL LINE
PB CHROMA SIGNAL LINE
REC CHROMA SIGNAL LINE

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN μF
ALL INDUCTORS IN μH (K)
ALL DIODES ARE 1SS131T

VS-G40EA/EDG/EK/EM/EO
VS-G43EK/EOH
VS-G44EK/EOH-V
VS-G45EOG-V
MAIN (A) 1/3
SCHEMATIC DIAGRAM
NO.19-2 V116802M A0


A
B
C
D
E
F
1
2
3
4
5
6
7
8
TO MAIN (A) PCB 3/3
DM.POW
CM.POW
P.GND
T.MUTE
PWM
BAND.B
BAND.A
AFT
AFT-H
TV/VCR
AFT-L
-35V
BUP5V
AC.4V
AC.4V
BAND.C
P.DOWN
GND
IDL5V
MOTOR13V
TO MAIN (A) PCB 1/3
IDL 5V
IDL 9V
REC.S
IC302 BA6229
FR350 1/4W 0.47
GND
OUT1
DRIVE OUT
REG VoL
LM.F
LM.R
VCC
DRIVE OUT
OUT2
C350 0.022
3.9V
0V
C351 0.01
0.6V
14.2V
3.2V
C353 1/50
C352 0.01
C354 1/50
LM+
LM-
D304 UTZJ10A
D303 UTZJ7.5C
TR306
0V
5.1V
DTC144ES
TO CTL HEAD
WP801-2
CTL.+
CTL.-
IDL5V
P301
TO DRUM MOTOR
PG
GND
FG
DM POWER
M.GND
CONT
R350 2(1/6W)
R351 2(1/6W)
R353 470K
C355 0.022
R352 20K
1.7V
2.3V
2.5V
2.5V
1/2
D305
D306
D307
DM.STOP
R355 22K
R354 510K
R373 130K
R356 F10K
R357 F8.2K
F750
R358
C358 33/6.3
R361 22K
R360 22K
R359 22K
DTA144TS
TR307
1.9V
2.6V
C357 1/50
C356 4.7/25
IC303 BA15218N
TR308
2.6V
5.2V
2.9V
DTA144TS
R362 2.2K
C359 2.2/50
R363 6.2K
680K
R364
R366 2.2K
2.8V
2/2
R365 18K
2.6V
DTA144TS
3.1V
C360 4.7/35
TR309
2.6V
5.2V
R369 F3.3K
R368 F20K
R367 F22K
TR310
2.8V
0V
DTC144ES
R370 10K
C361 1/50
R371 47K
R372 33K
R374 15K
R375 4.7K
R376 1K
D308
CPD
CFV
CM.STOP
R349 10K
P302
TO CAPSTAN MOTOR
FWD/REV
FG
CM.CONT
LIMIT
IDL5V
GND
CM.POWER
P.GND
C371 47/16
C363 47/16
F2.2K R377
R378 F10K
C362 1/50
R379 F6.2K
R380 F2.4K
D309
R381 R382 R383 R384
10K
C348 0.022/25(Z)
P303
TO SENSOR PCB WP1
S.SENS
RSW1
RSW2
RSW3
RSW4
IDL5V
T.REEL.P
END.SENS
N.C
GND
LM+
LM-
REC.SAF
IDL5V
R388 13K
C329 0.01
R387 13K
TRP
10K R385
C349 0.022/25(Z)
AC4V
AC4V
*5 NOT USED EM MODEL
R335
R336
C364 0.01
C365 0.01
C366 0.01
C367 0.01
C368 0.01
R394 100
C369 0.022F/5.5(Z)
EM ONLY
TO SUB PCB P1
AC 4V IN ③
AC 4V IN ②
AC 4V OUT ①
WP301
P304
-35V
GND
AC4V
PWM
BAND.B
P.DOWN
BAND.A
AFT-L
TV/VCR
AFT-H
AFT
BUP5V
T.MUTE
AC4V
BAND.C
TO OPERATION (B) PCB P3
MAIN (A) PCB V1130A501A
ENV.SW 0.4V
TUN
A.E
REC
A.R
NP
YNR
REC
SRD
SRP
RSW
RSW
RSW
RSW
LM.
LM.
TRQ
SCK
SI
SO
RES
V.SWP
R330 68K
R331 62K
WA
AV

*5	EA EK	EDG	EO EOH	EOG -/
R335	8.2	16	12	11
R336	11	18	9.1	9.1


MAIN (A) PCB 1/3
REC.S
TO MAIN (A) PCB 3/3
EXT
TO MAIN (B) PCB
A MUTE
A REC
A.EE
V.J
SD.P
TR313
DTC144ES
C370
0.33/50
TR301
DTC144ES
IC301
MN675201A-XDS1
QBXSYP2
TUNE
A.EE
REC.S
A.REC
NP
YNR
REC.SAF
SRDY
SRP
RSW4
RSW3
RSW2
RSW1
LM.R
LM.F
TRQUP
SCK
SI
SO
RESET
TR302
2SC3350
TR303
DTA114TS
EM ONLY
TR304
DTA144ES
TR305
DTC144ES
L301
L302
VR301
X301
SP
YNR
NP
TUNE
ENV.SW
HASW
C.ROT
ANC VOL
ENV DET
PICTURE
V.SYNC
NTSC
TRICK
V.SWP
VP
EE
PB
PAL/MESECAM
RESET
SRDY
SCK
SI
SO
TO MAIN (A) PCB 1/3
R388
13K
C329
0.01

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W, 1/8W (J)
ALL CAPACITORS IN μF (P=PF)
ALL ELECTROLYTIC CAPACITORS IN μF/WV
ALL INDUCTORS IN μH (K)
ALL DIODES ARE 1SS131T

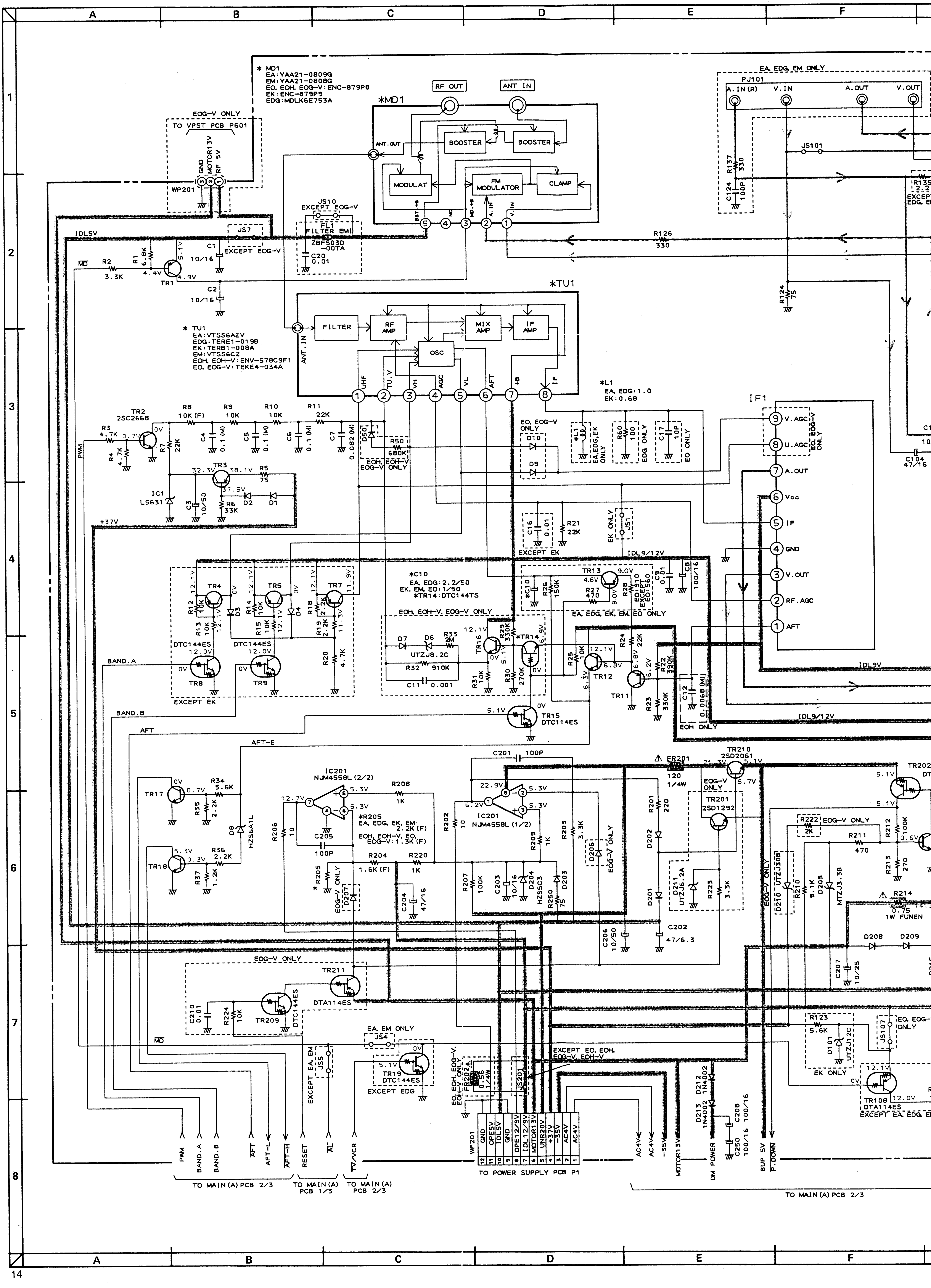
INDICATED VOLTAGES WERE
MEASURED DURING PB MODE.
(TAPE SPEED: SP)

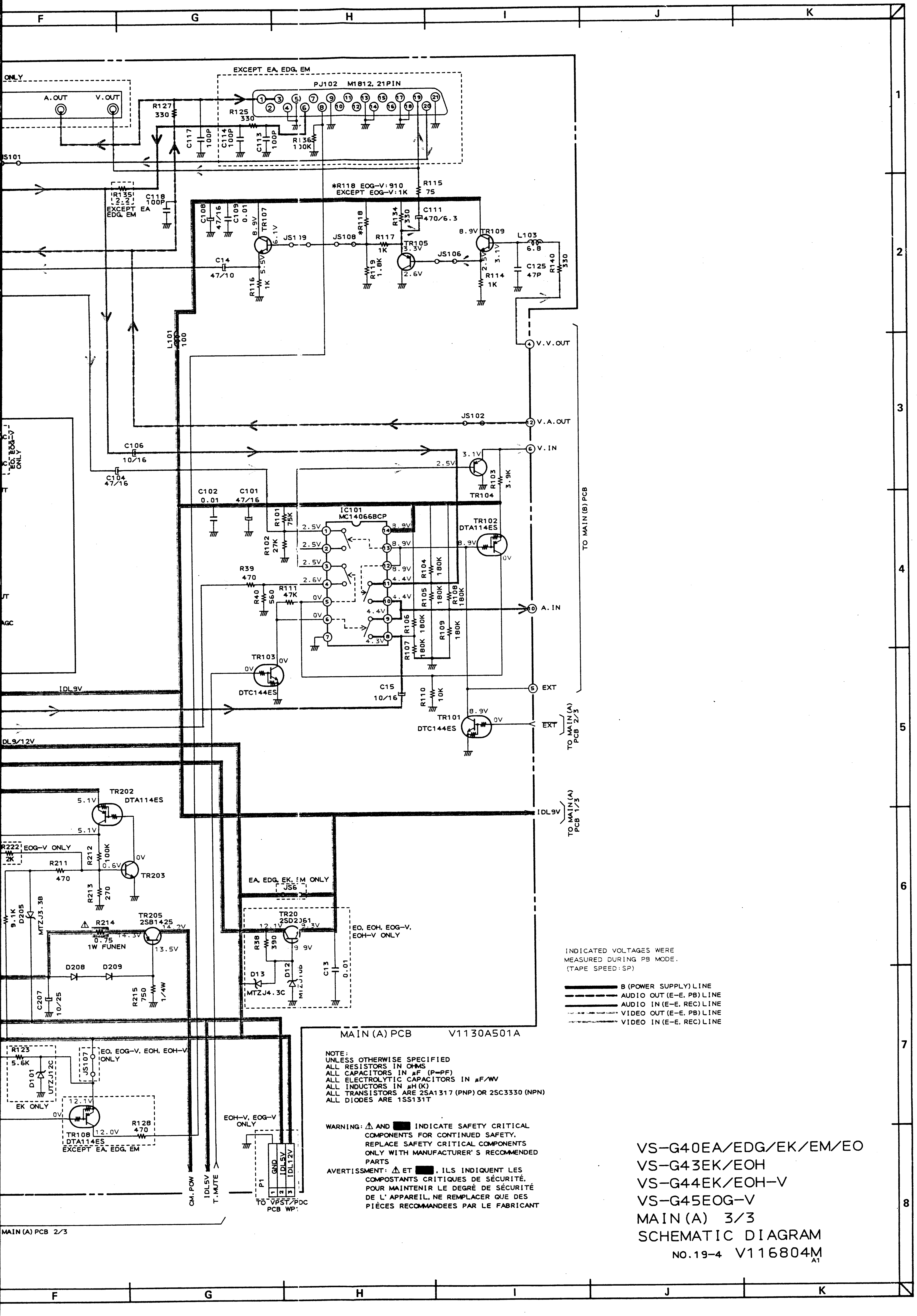
WARNING: ⚠ AND ■ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSMENT: ⚠ ET ■, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

━━━━ B (POWER SUPPLY) LINE
━ ━ ━ CAPSTAN MOTOR SPEED CONTROL LINE
━━ ━━ CAPSTAN MOTOR PHASE CONTROL LINE
── ── DRUM MOTOR SPEED CONTROL LINE
-·-·- DRUM MOTOR PHASE CONTROL LINE

VS-G40EA/EDG/EK/EM/EO
VS-G43EK/EOH
VS-G44EK/EOH-V
VS-G45EOG-V
MAIN (A) 2/3
SCHEMATIC DIAGRAM
NO.19-3 V116803M
A1


A
B
C
D
E
F
1
2
3
4
5
6
7
8
* MD1
EA:YAA21-0809G
EM:YAA21-0808G
EO, EOH, EOG-V:ENC-879P8
EK:ENC-879P9
EDG:MDLK6E753A
*MD1
RF OUT
ANT IN
ANT.OUT
BOOSTER
BOOSTER
MODULAT
FM MODULATOR
CLAMP
BST.+B
NC
MD.+B
A.IN
V.IN
EOG-V ONLY
TO VPST PCB P601
GND
MOTOR13V
RF 5V
WP201
JS10
EXCEPT EOG-V
FL1
FILTER EMI
ZBF503D
-00TA
C20
0.01
JS7
EXCEPT EOG-V
IDL5V
MD
R2
3.3K
R1
6.8K
4.4V
5.1V
4.9V
TR1
C1
10/16
C2
10/16
*TU1
* TU1
EA:VTSS6AZV
EDG:TERE1-019B
EK:TERB1-008A
EM:VTSS6CZ
EOH, EOH-V:ENV-578C9F1
EO, EOG-V:TEKE4-034A
ANT.IN
FILTER
RF AMP
MIX AMP
IF AMP
OSC
UHF
TU.V
VH
AGC
VL
AFT
+B
IF
*L1
EA, EDG:1.0
EK:0.68
TR2
2SC2668
R3
4.7K
R4
4.7K
0.7V
0V
R7
22K
R8
10K (F)
R9
10K
R10
10K
R11
22K
C4
0.1 (M)
C5
0.1 (M)
C6
0.1 (M)
C7
0.082 (M)
D50
R50
680K
EOH, EOH-V
EOG-V ONLY
PWM
TR3
32.3V
38.1V
37.5V
R5
75
R6
33K
D2
D1
IC1
L5631
C3
10/50
+37V
EO, EOG-V ONLY
D10
D9
*L1
EA,EDG,EK ONLY
R60
100
EDG ONLY
C17
10P
EO ONLY
IF1
V.AGC
U.AGC
EO, EOG-V ONLY
A.OUT
Vcc
IF
GND
V.OUT
RF.AGC
AFT
C16
0.01
R21
22K
EXCEPT EK
EK ONLY
JS1
IDL9/12V
C9
0.01
C8
100/16
TR13
9.0V
4.6V
R27
470
R28
9.0V
EO 910
EXCEPT EO 560
R26
150K
*C10
EA, EDG, EK, EM, EO ONLY
*C10
EA, EDG:2.2/50
EK, EM, EO:1/50
*TR14:DTC144TS
EOH, EOH-V, EOG-V ONLY
D7
D6
R33
2M
UTZJ8.2C
R32
910K
C11
0.001
TR16
12.1V
0V
R29
330K
5.1V
*TR14
6.9V
0V
R31
10K
R30
270K
R25
10K
12.1V
6.8V
6.3V
TR12
R24
22K
6.8V
6.2V
R22
390K
TR11
R23
330K
C12
0.0068 (M)
EOH ONLY
IDL9V
IDL9/12V
TR15
DTC114ES
5.1V
0V
12.1V
TR4
R12
10K
R13
10K
D3
0V
12.1V
TR5
R14
10K
R15
10K
12.1V
D4
0V
12.1V
TR7
R18
2.2K
R19
2.2K
11.3V
11.9V
R20
4.7K
DTC144ES
12.0V
TR8
DTC144ES
12.0V
TR9
0V
0V
EXCEPT EK
BAND.A
BAND.B
AFT
AFT-E
TR17
0V
0.7V
R34
5.6K
R35
2.2K
D8
HZS6A1L
TR18
5.3V
0.3V
R36
2.2K
R37
1.2K
IC201
NJM4558L (2/2)
12.7V
5.3V
5.3V
R208
1K
R206
10
C205
100P
*R205
EA, EDG, EK, EM:
2.2K (F)
EOH, EOH-V, EO,
EOG-V:1.3K (F)
R204
1.6K (F)
R220
1K
* R205
EOG-V ONLY
D207
C204
47/16
C201
100P
22.9V
6.2V
5.3V
5.3V
IC201
NJM4558L (1/2)
R202
10
R207
100K
C203
10/16
D204
HZS5C3
R250
75
D203
R209
1K
R203
3.3K
D206
EOG-V ONLY
C206
10/50
FR201
120
1/4W
TR210
2SD2061
21.3V
5.1V
5.7V
EOG-V ONLY
TR201
2SD1292
R201
220
D202
D201
D211
UTZJ6.2A
R223
3.3K
C202
47/6.3
TR202
5.1V
5.1V
R222
2K
EOG-V ONLY
R211
470
R212
100K
0.6V
R213
270
EOG-V ONLY
D210 UTZJ30B
R210
9.1K
D205
MTZJ3.3B
R214
0.75
1W FUNEN
D208
D209
C207
10/25
EOG-V ONLY
TR211
DTA114ES
C210
0.01
R224
10K
TR209
DTC144ES
MD
EA, EM ONLY
JS4
0V
5.1V
TR19
DTC144ES
EXCEPT EDG
EXCEPT EA, EM
JS5
EO, EOH, EOG-V, EOH-V ONLY
FR202
0.56
1/4W
JS201
EXCEPT EO, EOH, EOG-V, EOH-V
D212
1N4002
D213
1N4002
C208
100/16
C250
100/16
R123
5.6K
D101
UTZJ12C
EK ONLY
JS107
EO, EOG-V ONLY
TR108
12.1V
0V
12.0V
DTA114ES
EXCEPT EA, EDG, E
EA, EDG, EM ONLY
PJ101
A.IN(R)
V.IN
A.OUT
V.OUT
JS101
R137
330
C124
100P
R135
2.2
EXCEPT
EDG, E
R126
330
R124
75
C104
47/16
PWM
BAND.A
BAND.B
AFT
AFT-L
AFT-H
RESET
AL
TV/VCR
TO MAIN (A) PCB 2/3
TO MAIN (A) PCB 1/3
TO MAIN (A) PCB 2/3
WF201
GND
OPE5V
IDL5V
GND
OPE12/9V
IDL12/9V
MOTOR13V
UNR20V
+37V
-35V
AC4V
AC4V
12
11
10
9
8
7
6
5
4
3
2
1
TO POWER SUPPLY PCB P1
AC4V
AC4V
-35V
MOTOR13V
DM POWER
BUP 5V
P.DOWN
TO MAIN (A) PCB 2/3


F
G
H
I
J
K
1
2
3
4
5
6
7
8
EXCEPT EA, EDG, EM
PJ102 M1812, 21PIN
A.OUT
V.OUT
R127 330
R125 330
C117 100P
C114 100P
C113 100P
R136 100K
JS101
R135 2.2 EXCEPT EA EDG, EM
C118 100P
*R118 EOG-V:910 EXCEPT EOG-V:1K
R115 75
C108 47/16
C109 0.01
TR107
8.9V
6.1V
5.5V
JS119
JS108
*R118
R134 330
C111 470/6.3
R117 1K
TR105
3.3V
2.6V
R119 1.8K
JS106
8.9V
TR109
3.1V
2.5V
R114 1K
L103 6.8
C125 47P
R140 330
C14 47/10
R116 1K
L101 100
V.V.OUT
JS102
V.A.OUT
V.IN
C106 10/16
C104 47/16
3.1V
2.5V
R103 3.9K
TR104
C102 0.01
C101 47/16
R101 75K
R102 27K
IC101 MC14066BCP
TR102 DTA114ES
R39 470
R40 560
R111 47K
R104 180K
R105 180K
R108 180K
R106 180K
R109 180K
R107 180K
A.IN
TR103 DTC144ES
C15 10/16
R110 10K
EXT
TR101 DTC144ES
TO MAIN (B) PCB
TO MAIN (A) PCB 2/3
TO MAIN (A) PCB 1/3
IDL9V
IDL9/12V
TR202 DTA114ES
5.1V
R222 2K EOG-V ONLY
R211 470
R212 100K
R213 270
0.6V
TR203
D205 MTZJ3.3B
TR205 2SB1425
R214 0.75 1W FUNEN
14.2V
14.3V
13.5V
D208
D209
R215 750 1/4W
C207 10/25
EA, EDG, EK, EM ONLY
JS6
TR20 2SD2061
12.1V
9.3V
R38 390
9.9V
D13 MTZJ4.3C
D12 MTZJ10B
C13 0.01
EO, EOH, EOG-V, EOH-V ONLY
MAIN (A) PCB V1130A501A
R123 5.6K
D101 UTZJ12C
JS107
EO, EOG-V, EOH, EOH-V ONLY
EK ONLY
12.1V
0V
TR108 DTA114ES
12.0V
R128 470
EXCEPT EA, EDG, EM
EOH-V, EOG-V ONLY
P1
GND
IDL5V
IDL12V
TO VPST/PDC PCB WP1
CM.POW
IDL5V
T.MUTE
MAIN (A) PCB 2/3

NOTE:
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN µF (P=PF)
ALL ELECTROLYTIC CAPACITORS IN µF/WV
ALL INDUCTORS IN µH (K)
ALL TRANSISTORS ARE 2SA1317 (PNP) OR 2SC3330 (NPN)
ALL DIODES ARE 1SS131T

WARNING: ⚠ AND ■ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSMENT: ⚠ ET ■, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ, POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

INDICATED VOLTAGES WERE MEASURED DURING PB MODE. (TAPE SPEED: SP)

━━ B (POWER SUPPLY) LINE
━ ━ AUDIO OUT (E-E, PB) LINE
─── AUDIO IN (E-E, REC) LINE
─ ─ VIDEO OUT (E-E, PB) LINE
┄┄ VIDEO IN (E-E, REC) LINE

VS-G40EA/EDG/EK/EM/EO
VS-G43EK/EOH
VS-G44EK/EOH-V
VS-G45EOG-V
MAIN (A) 3/3
SCHEMATIC DIAGRAM
NO.19-4 V116804M A1

PRINCIPAL PARTS LOCATION

ICs

IC101	D5
IC201	F4,5
IC301	E1,2
IC302	F1,2
IC303	E,F3
IC400	C3
IC401	C,D4
IC402	C,D1
IC403	C5

WF & WPs

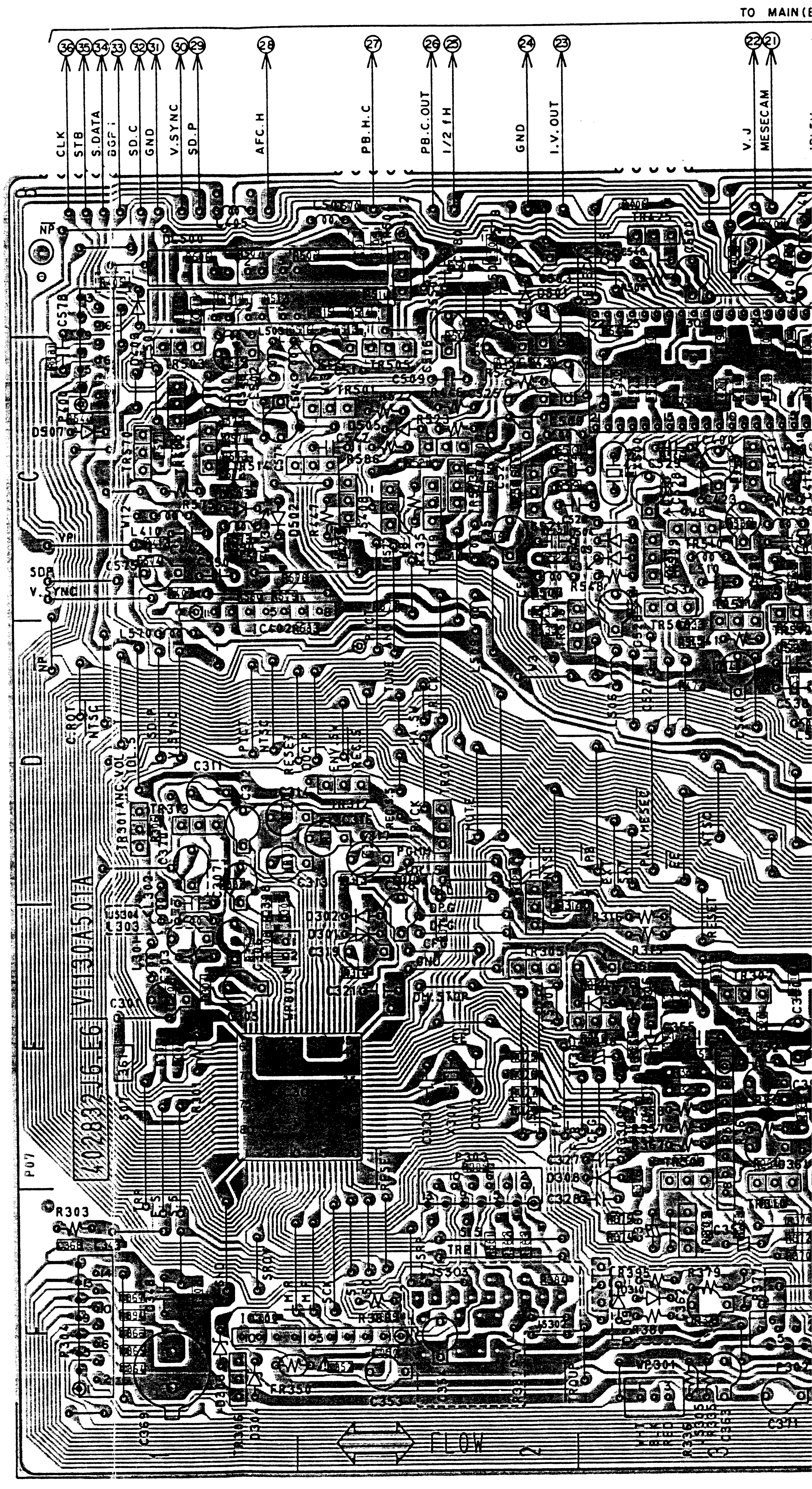
WF201	F4,5
WP301	F3
WP801	E1,2

CONNECTORs

P1	E,F5
P250	F4
P301	E3
P302	F4
P303	E2
P304	F1
P400	B,C1
P401	D5

TRANSISTORs

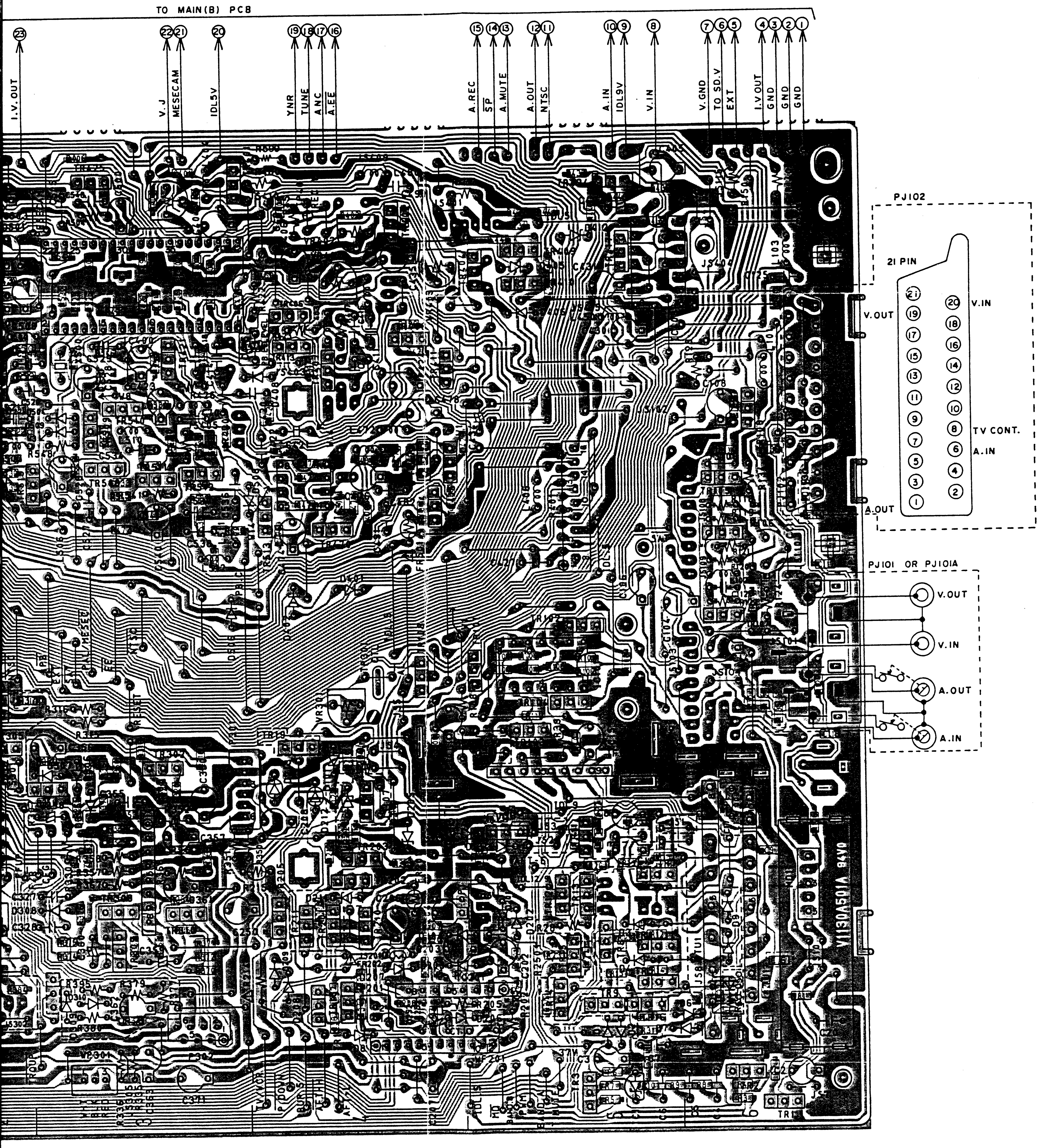
TR1	F6
TR2	F6
TR3	F5
TR4	F5
TR5	F5
TR6	F5
TR7	E5
TR8	F5
TR9	F5
TR11	E5
TR12	E5
TR13	E,F5
TR14	F5
TR15	F5
TR16	F5
TR17	F4
TR18	F4
TR19	E4
TR20	E5
TR101	D5
TR102	D5
TR103	E5
TR104	E5
TR105	D6
TR107	D6
TR108	D4
TR109	C6
TR201	F4
TR202	E4
TR203	E4
TR205	E,F4
TR209	F4
TR210	E,F4
TR211	F4
TR301	D1
TR302	E3
TR303	D,E2
TR304	D2
TR305	E2
TR306	F1
TR307	E3
TR308	E,F4
TR309	F3
TR310	E,F3
TR313	D1
TR401	B3
TR402	B4
TR404	C5
TR406	C4
TR407	C4
TR408	C4
TR409	C5
TR410	C5
TR411	C4
TR413	C4
TR414	D4
TR415	C4
TR417	C5
TR419	C2
TR421	C3
TR423	C2
TR424	B5
TR425	B3
TR470	D4
TR471	C4
TR501	C2
TR502	C1
TR503	C1
TR504	C1
TR505	C2
TR506	C2
TR507	C2
TR508	C,D3
TR509	C3
TR510	C3
TR511	D3
TR512	C,D3
TR513	D4
TR514	C2
TR515	C2
TR570	C1
TR571	C1
TR572	C2
TR573	C2


TO MAIN(E
36 CLK
35 STB
34 S.DATA
33 BGP↓
32 SD.C
31 GND
30 V.SYNC
29 SD.P
28 AFC.H
27 PB.H.C
26 PB.C.OUT
25 1/2 f H
24 GND
23 I.V.OUT
22 V.J
21 MESECAM
C
D
E
NP
VP
SDP
V.SYNC
C.ROT
NTSC
VOL
P07
FLOW
2
RESET
R303
C311
C313

MAIN(

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

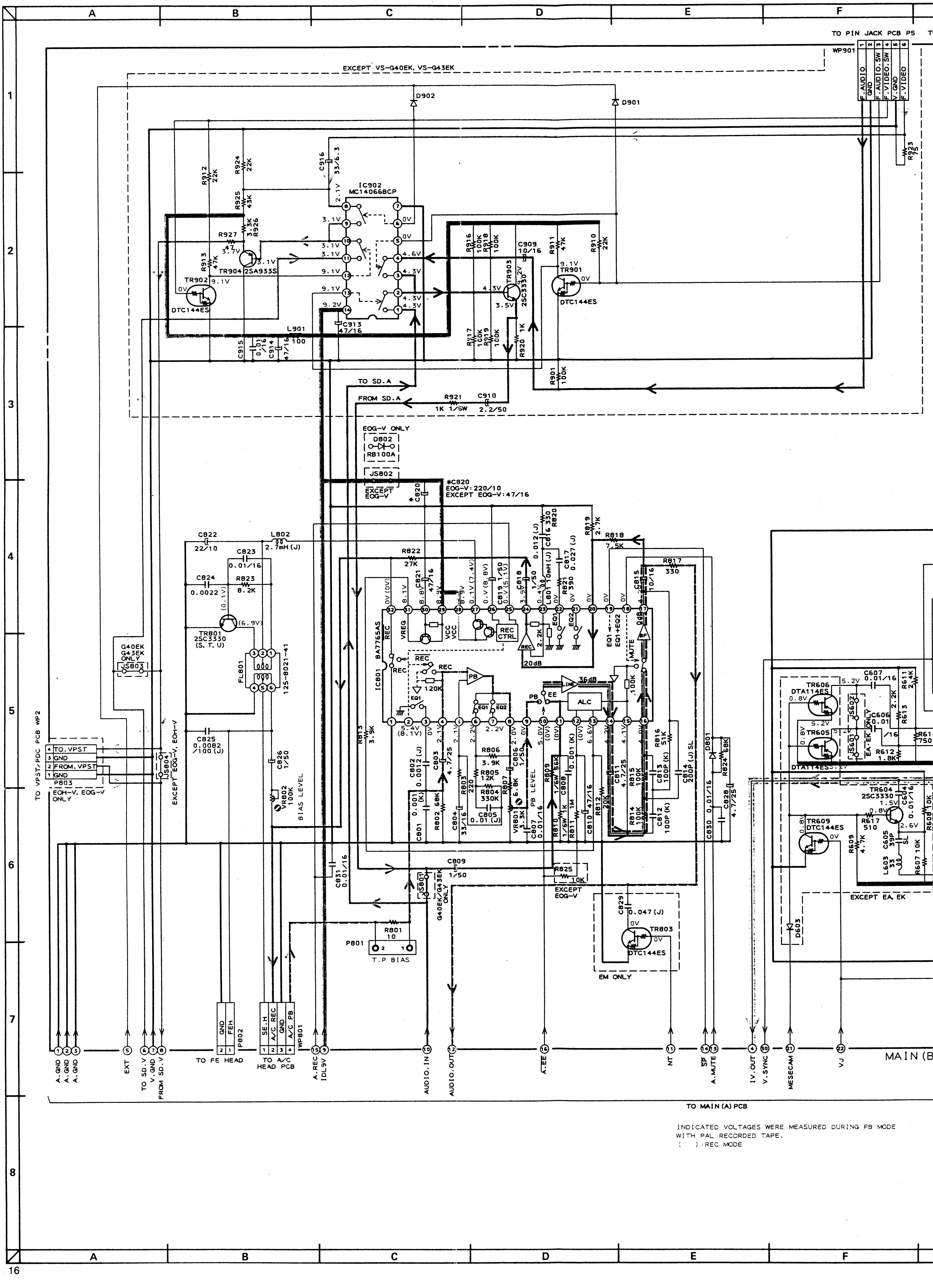

TO MAIN(B) PCB
㉓ I.V.OUT
㉒ V.J
㉑ MESECAM
⑳ IDL5V
⑲ YNR
⑱ TUNE
⑰ ANC
⑯ A.EE
⑮ A.REC
⑭ SP
⑬ A.MUTE
⑫ A.OUT
⑪ NTSC
⑩ A.IN
⑨ IDL9V
⑧ V.IN
⑦ V.GND
⑥ TO SD.V
⑤ EXT
④ I.V.OUT
③ GND
② GND
① GND
PJ102
21 PIN
V.OUT
V.IN
TV CONT.
A.IN
A.OUT
PJ101 OR PJ101A
V.OUT
V.IN
A.OUT
A.IN
VI130A501A 94V0

MAIN(A) PCB VI130A501A(J6)

NTINUED SAFETY,
MANUFACTURER'S

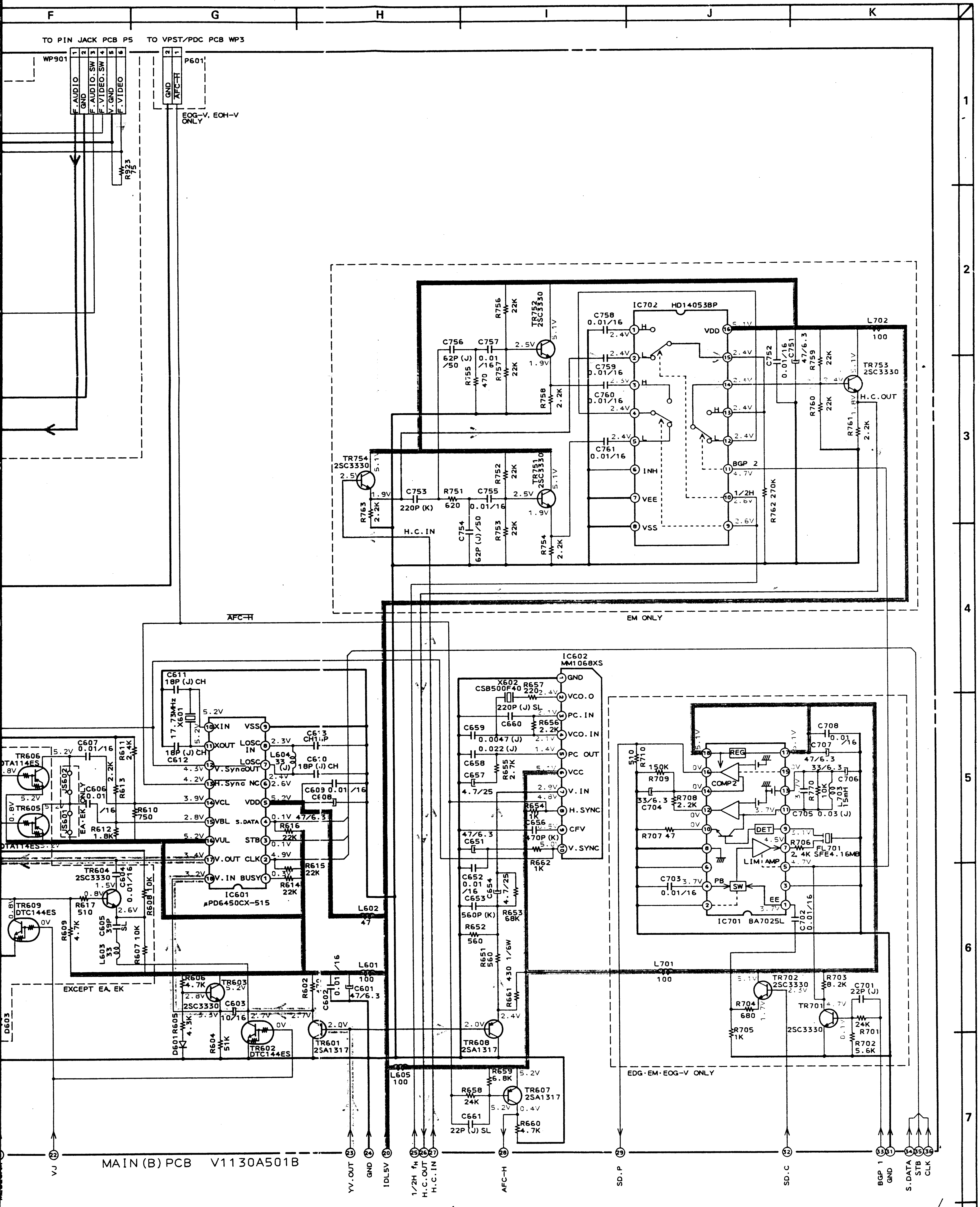
SÉCURITÉ.
EIL.
R LE FABRICANT

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER.
REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT
PARTS INFORMATION.


A
B
C
D
E
F
1
2
3
4
5
6
7
8
TO PIN JACK PCB P5
WP901
F.AUDIO
GND
F.AUDIO.SW
F.VIDEO.SW
V.GND
F.VIDEO
EXCEPT VS-G40EK, VS-G43EK
D902
D901
C916 33/6.3
IC902 MC14066BCP
R912 22K
R924 22K
R925 43K
R926 3.3K
R927 47
R913 47K
TR904 2SA933S
TR902 DTC144ES
R916 100K
R918 100K
C909 10/16
R911 47K
R910 22K
TR903 2SC3330
TR901 DTC144ES
R923 75
C913 47/16
L901 100
C915 0.01/16
C914 47/16
R917 100K
R919 100K
R920 1K
R901 100K
TO SD.A
FROM SD.A
R921 1K 1/6W
C910 2.2/50
EOG-V ONLY
D802 RB100A
JS802
EXCEPT EOG-V
*C820 EOG-V:220/10 EXCEPT EOG-V:47/16
C822 22/10
L802 2.7mH (J)
C823 0.01/16
C824 0.0022
R823 8.2K
TR801 2SC3330 (S, T, U)
FL801 125-8021-41
R822 27K
C821 47/16
C818 1/50
C819 1/50
C816 330
R820
C817 0.027 (J)
R819 2.7K
R818 7.5K
R817 330
C815 10/16
L801 10mH (J)
R821 390
IC801 BA7765AS
VREG
VCC
REC CTRL
REC
PB
EQ1
EQ2
EQ1+EQ2
MUTE
BF
EE
LINE
ALC
36dB
20dB
0dB
120K
100K
G40EK G43EK ONLY
JS803
EXCEPT EOG-V, EOH-V
JS804
C825 0.0082 /100 (J)
C826 1/50
VR802 100K
BIAS LEVEL
R813 3.9K
C802 0.0012 (J)
C803 4.7/25
R806 3.9K
R805 12K
R804 330K
R803 220
R807 6.8K
C806 1/50
VR801 3.3K
PB LEVEL
R809 56K
C808 0.001 (K)
C801 0.001 (K)
R802 68K
C804 33/16
C805 0.01 (J)
C807 0.01/16
R810 1K 1/6W
R811 1M
C810 47/16
R812 20K
C811 4.7/25
R815 100K
R816 51K
C813 100P (K)
C814 200P (J) SL
R814 100K
C812 100P (K)
D801
R824 68K
C830 0.01/16
C828 4.7/25
C831 0.01/16
C809 1/50
R825 10K
EXCEPT EOG-V
JS801
G40EK/G43EK ONLY
R801 10
P801
T.P BIAS
C829 0.047 (J)
TR803 DTC144ES
EM ONLY
TO VPST/PDC PCB WP2
TO.VPST
GND
FROM.VPST
GND
P803
EOH-V, EOG-V ONLY
GND
FEH
P802
TO FE HEAD
SE.H
A/C REC
GND
A/C PB
WP801
TO A/C HEAD PCB
A.GND
A.GND
A.GND
EXT
TO SD.V
V.GND
FROM SD.V
A.REC
IDL9V
AUDIO.IN
AUDIO.OUT
A.EE
NT
SP
A.MUTE
IV.OUT
V.SYNC
MESECAM
VJ
MAIN (B
TR606 DTA114ES
C607 0.01/16
R611 2.4K
2.2K
R613
JS602
C606 0.01
EA·EK ONLY
TR605
JS601
R612 1.8K
R61 750
DTA114ES
TR604 2SC3330
C604 0.01/16
R608 10K
TR609 DTC144ES
R617 510
R609 4.7K
C605 39P
L603 33
SL
R607 10K
EXCEPT EA, EK
D603

TO MAIN (A) PCB

INDICATED VOLTAGES WERE MEASURED DURING PB MODE
WITH PAL RECORDED TAPE.
( ) : REC MODE


F
G
H
I
J
K
1
2
3
4
5
6
7
TO PIN JACK PCB P5
TO VPST/PDC PCB WP3
WP901
F.AUDIO
GND
F.AUDIO.SW
F.VIDEO.SW
V.GND
F.VIDEO
P601
GND
AFC-H
EOG-V, EOH-V ONLY
R923 75
IC702 HD14053BP
VDD
INH
VEE
VSS
BGP 2
1/2H
L702 100
TR753 2SC3330
H.C.OUT
TR752 2SC3330
TR751 2SC3330
TR754 2SC3330
H.C.IN
C756 62P (J) /50
C757 0.01 /16
C758 0.01/16
C759 0.01/16
C760 0.01/16
C761 0.01/16
C752 0.01/16
C751 47/6.3
C753 220P (K)
C754 62P (J) /50
C755 0.01/16
R751 620
R752 22K
R753 22K
R754 2.2K
R755 470
R756 22K
R757 22K
R758 2.2K
R759 22K
R760 22K
R761 2.2K
R762 270K
R763 2.2K
EM ONLY
AFC-H
IC602 MM1068XS
GND
VCO.O
PC.IN
VCO.IN
PC OUT
VCC
V.IN
H.SYNC
CFV
V.SYNC
X602 CSB500F40
R657 220
220P (J) SL
R656 2.2K
C659 0.0047 (J)
C660
C658 0.022 (J)
C657 4.7/25
R655 2.7K
R654 1K
C656 470P (K)
R662 1K
C651 47/6.3
C652 0.01 /16
C654 4.7/25
C653 560P (K)
R653 68K
R652 560
R651 560
R661 430 1/6W
TR608 2SA1317
L605 100
R658 24K
R659 6.8K
TR607 2SA1317
C661 22P (J) SL
R660 4.7K
IC601 μPD6450CX-515
XIN
XOUT
V.Sync
H.Sync
VCL
VBL
VUL
V.OUT
V.IN
VSS
LOSC IN
LOSC OUT
NC
VDD
S.DATA
STB
CLK
BUSY
C611 18P (J) CH
X601 17.73MHz
C612 18P (J) CH
C613 CH1.1P
C610 18P (J) CH
L604 33 (J)
C609 0.01 /16
C608 47/6.3
R616 22K
R615 22K
R614 22K
L602 47
L601 100
C601 47/6.3
C602 0.01 /16
R602
TR601 2SA1317
TR602 DTC144ES
TR603
TR604 2SC3330
TR605
TR606 DTA114ES
TR609 DTC144ES
C603 10/16
C604 0.01/16
C605 39P
C606 0.01 /16
C607 0.01/16
R603 4.3K
R604 51K
R606 4.7K
R607 10K
R608 10K
R609 4.7K
R610 750
R611 2.4K
R612 1.8K
R613
R617 510
L603 33
JS601
JS602
EA·EK ONLY
EXCEPT EA, EK
D601
D603
IC701 BA7025L
REG
COMP2
DET
LIM AMP
PB
SW
EE
R705 1K
R704 680
R703 8.2K
R701 24K
R702 5.6K
R706 2.4K
R707 47
R708 2.2K
R709 150K
R710 510
C701 22P (J)
C702 0.01/16
C703 0.01/16
C704 33/6.3
C705 0.03 (J)
C706 33/6.3
C707 47/6.3
C708 0.01 /16
R770 10K
L703 15mH
FL701 SFE4.16MB
TR701 2SC3330
TR702 2SC3330
L701 100
EDG·EM·EOG-V ONLY
MAIN (B) PCB V1130A501B
VJ
YV.OUT
GND
IDL5V
1/2H f_H
H.C.OUT
H.C.IN
AFC-H
SD.P
SD.C
BGP 1
GND
S.DATA
STB
CLK
22
23
24
20
25
26
27
28
29
32
33
31
34
35
36

EASURED DURING PB MODE

- B (POWER SUPPLY) LINE
- PB AUDIO SIGNAL LINE
- REC AUDIO SIGNAL LINE
- PB Y SIGNAL LINE
- PB CHROMA SIGNAL LINE
- VIDEO IN (REC, E-E) SIGNAL LINE

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS (J)
ALL CAPACITORS IN μF
ALL INDUCTORS IN μH (K)
ALL DIODE ARE 1SS131T

VS-G40EA/EDG/EK/EM/EO
VS-G43EK/EOH
VS-G44EK/EOH-V
VS-G45EOG-V
MAIN (B)
SCHEMATIC DIAGRAM
NO.19-5 V116805M A1

F G H I J K

8

PRINCIPAL PARTS LOCATION

TRANSISTORs

TR601	A3
TR602	A3
TR603	A3
TR604	A3
TR605	A3
TR606	A3
TR607	A1
TR608	A3
TR609	A3
TR701	A1
TR702	A1
TR751	A2
TR752	A2
TR753	A2
TR754	A2
TR801	A4
TR803	B5
TR901	A6
TR902	A6
TR903	A6
TR904	B6

ICs

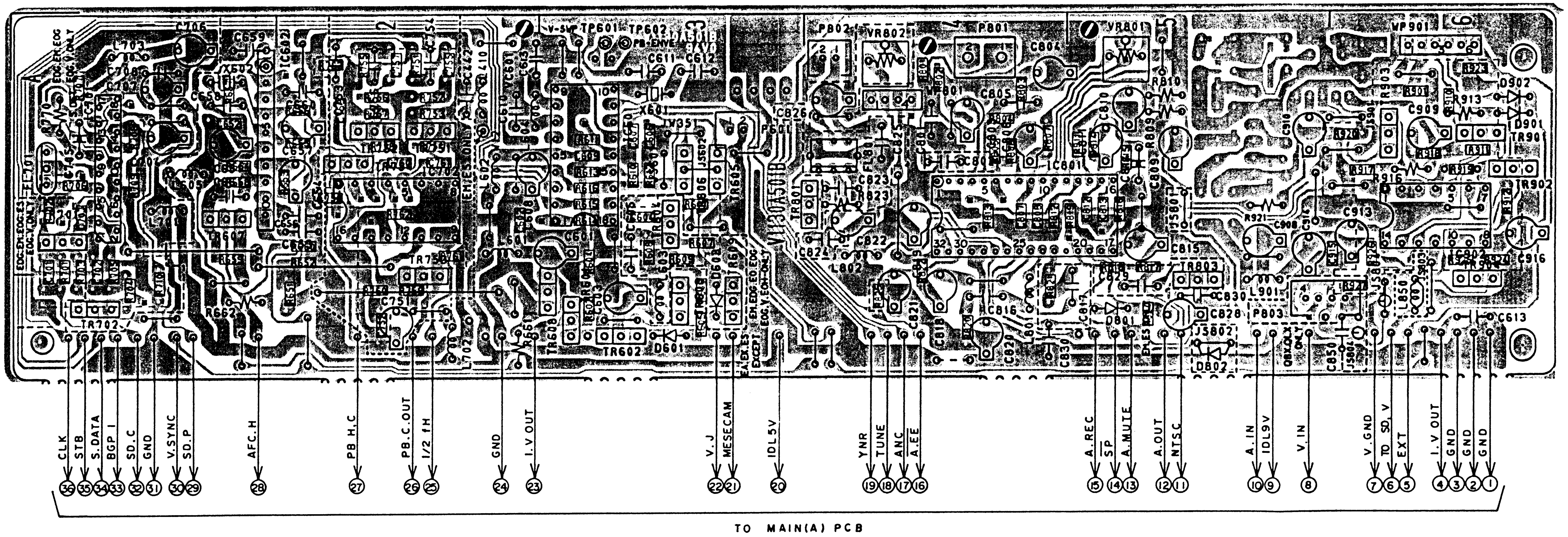
IC602	A1
IC701	A1
IC702	A2
IC801	A4
IC901	A5
IC902	A6

CONNECTORs

P601	A3
P801	A4
P802	A4
P803	A5,6

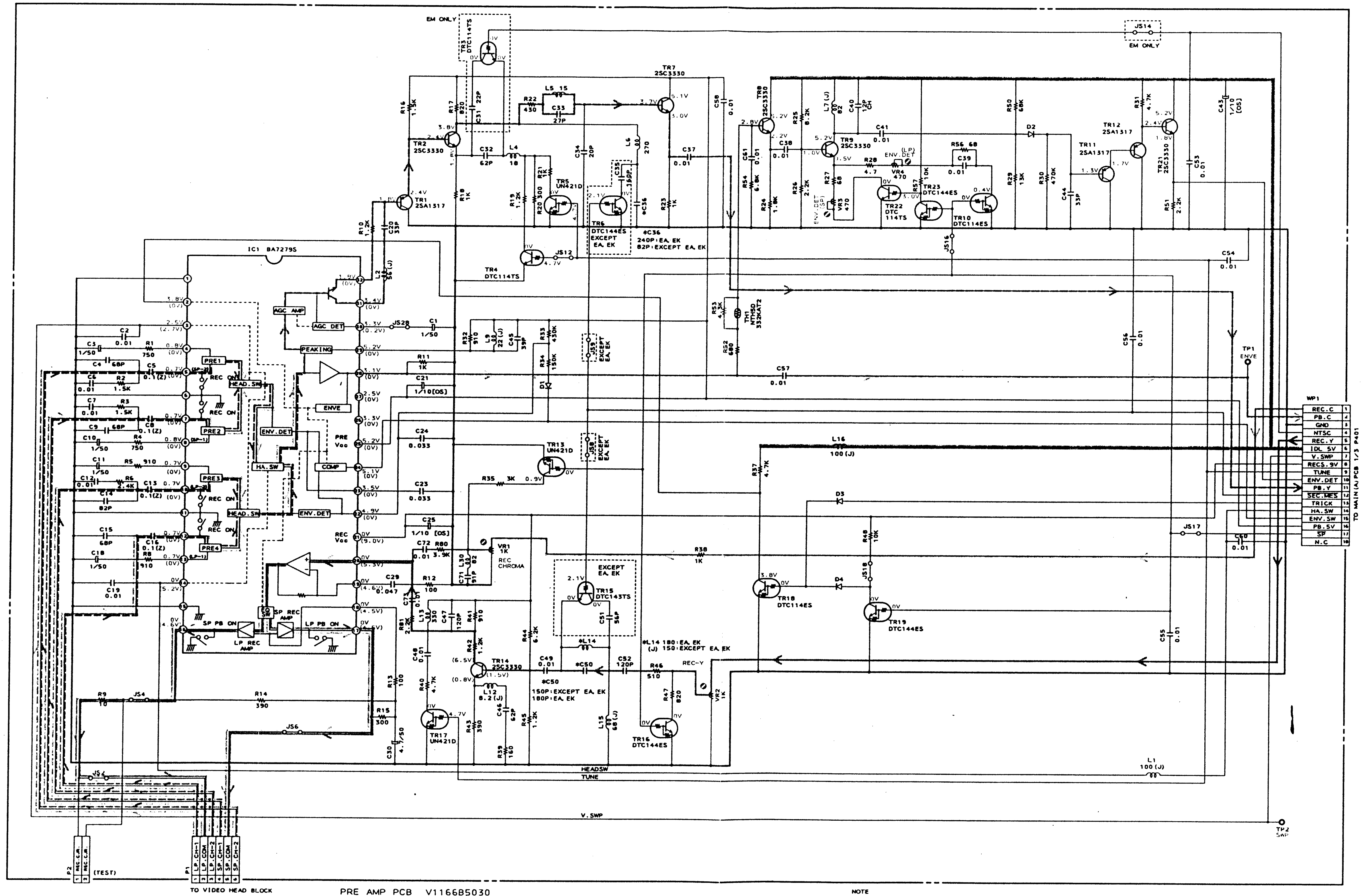
WPs

WP801	A4
WP901	A6


CLK
STB
S.DATA
BGP. I
SD.C
GND
V.SYNC
SD.P
AFC.H
PB H.C
PB.C.OUT
1/2 fH
GND
I.V OUT
V.J
MESECAM
IDL5V
YNR
TUNE
ANC
A.EE
A.REC
SP
A.MUTE
A.OUT
NTSC
A.IN
IDL9V
V.IN
V.GND
TO SD.V
EXT
I.V OUT
GND
GND
GND
㊱ ㉟ ㉞ ㉝ ㉜ ㉛ ㉚ ㉙
㉘
㉗
㉖ ㉕
㉔ ㉓
㉒ ㉑
⑳
⑲ ⑱ ⑰ ⑯
⑮ ⑭ ⑬
⑫ ⑪
⑩ ⑨
⑧
⑦ ⑥ ⑤
④ ③ ② ①
TO MAIN(A) PCB

MAIN(B) PCB V1130A501B(J6)

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER. REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT PARTS INFORMATION.


EM ONLY
TR3 DTC114TS
TR7 2SC3330
JS14
EM ONLY
L5 15
R22 430
C33 27P
TR8 2SC3330
TR9 2SC3330
TR2 2SC3330
TR1 2SA1517
TR5 UN421D
TR6 DTC144ES EXCEPT EA, EK
#C36 240P:EA, EK 82P:EXCEPT EA, EK
TR4 DTC114TS
JS12
ENV.DET
VR3 470
VR4 470
TR22 DTC 114TS
TR23 DTC144ES
TR10 DTC144ES
R56 68
C39 0.01
D2
TR11 2SA1317
TR12 2SA1317
TR21 2SC3330
JS16
C54 0.01
IC1 BA7279S
AGC AMP
AGC DET
PEAKING
JS28
C1 1/50
R11 1K
C21 1/10 [OS]
ENVE
ENV.DET
PRE Vcc
COMP
HA.SW
HEAD.SW
PRE1
PRE2
PRE3
PRE4
REC ON
JS9 EXCEPT EA, EK
JS8 EXCEPT EA, EK
TH1 NTH5D 332KAT2
C57 0.01
TP1 ENVE
WP1
REC.C 1
PB.C 2
GND 3
NTSC 4
REC.Y 5
IDL 5V 6
V.SWP 7
RECS.9V 8
TUNE 9
ENV.DET 10
PB.Y 11
SEC.MES 12
TRICK 13
HA.SW 14
ENV.SW 15
PB.5V 16
SP 17
N.C 18
TO MAIN (A) PCB 1/3 P401
L16 100 (J)
TR13 UN421D
R35 3K
D1
D3
D4
JS17
JS18
TR18 DTC114ES
TR19 DTC144ES
REC Vcc
VR1 1K REC CHROMA
R38 1K
C25 1/10 [OS]
C72 R80
TR15 DTC143TS EXCEPT EA, EK
#L14 180:EA, EK (J) 150:EXCEPT EA, EK
#C50 150P:EXCEPT EA, EK 180P:EA, EK
TR14 2SC3330
L12 8.2 (J)
REC-Y
VR2 1K
R46 510
SP PB ON
LP PB ON
LP REC AMP
SP REC AMP
R9 10
JS4
R14 390
R15 300
JS6
TR17 UN421D
TR16 DTC144ES
HEADSW
TUNE
L1 100 (J)
V.SWP
TP2 SWP
JS2
P2
REC.C.R
(TEST)
P1
LP.CH-1
LP.COM
LP.CH-2
SP.CH-1
SP.COM
SP.CH-2
TO VIDEO HEAD BLOCK

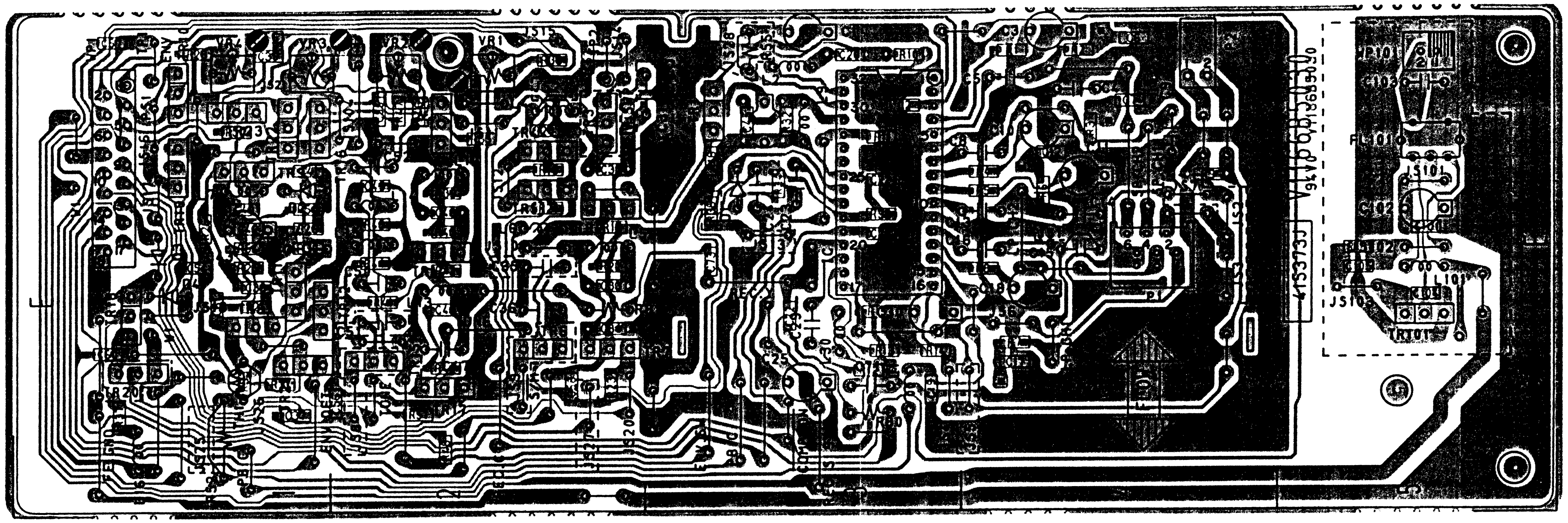
PRE AMP PCB V116685030

- ▬ B (POWER SUPPLY) LINE
- ‒ ‒ ‒ PB Y SIGNAL LINE
- ― REC Y SIGNAL LINE
- ┈ PB CHROMA SIGNAL LINE
- ┈ REC CHROMA SIGNAL LINE

INDICATED VOLTAGES WERE
MEASURED DURING PB MODE
( ) : REC MODE

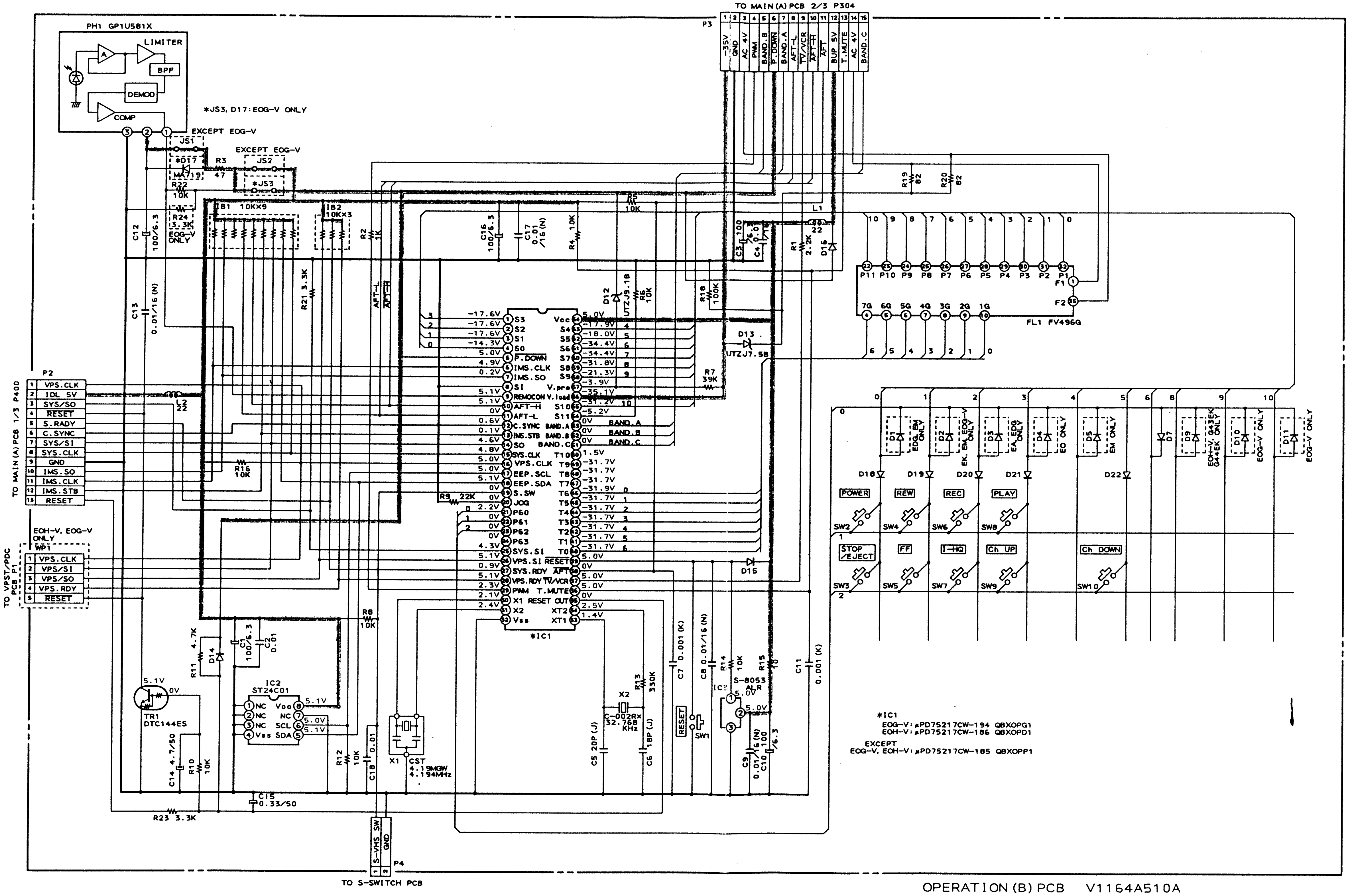
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN µF (P=PF)
ALL ELECTROLYTIC CAPACITORS IN µF/WV
ALL INDUCTORS IN µH
ALL DIODES ARE 1SS131

VS-G40EA/EDG/EK/EM/EO
VS-G43EK/EOH
VS-G44EK/EOH-V
VS-G45EOG-V
PRE AMP
SCHEMATIC DIAGRAM
NO.19-6 V116806M A1



PRE AMP PCB V1166B5030

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER.
REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT
PARTS INFORMATION.


TO MAIN (A) PCB 2/3 P304
P3
-35V
GND
AC 4V
PWM
BAND.B
P.DOWN
BAND.A
AFT-L
TV/VCR
AFT-H
AFT
BUP 5V
T.MUTE
AC 4V
BAND.C
PH1 GP1U581X
LIMITER
BPF
DEMOD
COMP
*JS3, D17: EOG-V ONLY
EXCEPT EOG-V
JS1
*D17
MA719
R3
47
JS2
*JS3
R22
10K
R24
3.3K
EOG-V ONLY
IB1 10KX9
IB2 10KX3
C12
100/6.3
C13
0.01/16 (N)
R2
1K
C16
100/6.3
C17
0.01/16 (N)
R4 10K
R5
10K
R21 3.3K
AFT-L
AFT-H
D12
UTZJ9.1B
R6
10K
L1
R1
2.2K
D16
C3 100/6.3
C4 0.01
22
R18
100K
D13
UTZJ7.5B
R7
39K
R19
82
R20
82
P11 P10 P9 P8 P7 P6 P5 P4 P3 P2 P1
F1
F2
7G 6G 5G 4G 3G 2G 1G
FL1 FV496G
P2
VPS.CLK
IDL 5V
SYS/SO
RESET
S.RADY
C.SYNC
SYS/SI
SYS.CLK
GND
IMS.SO
IMS.CLK
IMS.STB
RESET
TO MAIN (A) PCB 1/3 P400
L2
22
R16
10K
EOH-V, EOG-V ONLY
WP1
VPS.CLK
VPS/SI
VPS/SO
VPS.RDY
RESET
TO VPST/PDC PCB P1
S3
S2
S1
S0
P.DOWN
IMS.CLK
IMS.SO
SI
REMOCON
AFT-H
AFT-L
C.SYNC
IMS.STB
SO
SYS.CLK
VPS.CLK
EEP.SCL
EEP.SDA
S.SW
JOG
P60
P61
P62
P63
SYS.SI
VPS.SI
SYS.RDY
VPS.RDY
PWM
X1
X2
Vss
Vcc
S4
S5
S6
S7
S8
S9
V.pre
V.load
S10
S11
BAND.A
BAND.B
BAND.C
T10
T9
T8
T7
T6
T5
T4
T3
T2
T1
T0
RESET
AFT
TV/VCR
T.MUTE
RESET OUT
XT2
XT1
*IC1
R9 22K
R8
10K
R11 4.7K
D14
C1
100/6.3
C2
0.01
IC2
ST24C01
NC
Vcc
SCL
SDA
TR1
DTC144ES
C14 4.7/50
R10
10K
R12
10K
C18 0.01
X1
CST
4.19MGW
4.194MHz
X2
C-002RX
32.768 KHz
R13
330K
C5 20P (J)
C6 18P (J)
C15
0.33/50
R23 3.3K
C7 0.001 (K)
C8 0.01/16 (N)
RESET
SW1
R14
10K
IC3
S-8053 ALR
R15
10
C9 0.01/16 (N)
C10 100/6.3
C11 0.001 (K)
D15
D1 EDG, EM ONLY
D2 EK, EM, EOG-V ONLY
D3 EA, EDG ONLY
D4 EO ONLY
D5 EM ONLY
D7
D9 EOH-V, G43EK G44EK ONLY
D10 EOG-V ONLY
D11 EOG-V ONLY
D18
D19
D20
D21
D22
POWER
REW
REC
PLAY
SW2
SW4
SW6
SW8
STOP /EJECT
FF
I-HQ
Ch UP
Ch DOWN
SW3
SW5
SW7
SW9
SW10
S-VHS SW
GND
P4
TO S-SWITCH PCB
*IC1
EOG-V: μPD75217CW-194 QBXOPG1
EOH-V: μPD75217CW-186 QBXOPD1
EXCEPT
EOG-V, EOH-V: μPD75217CW-185 QBXOPP1

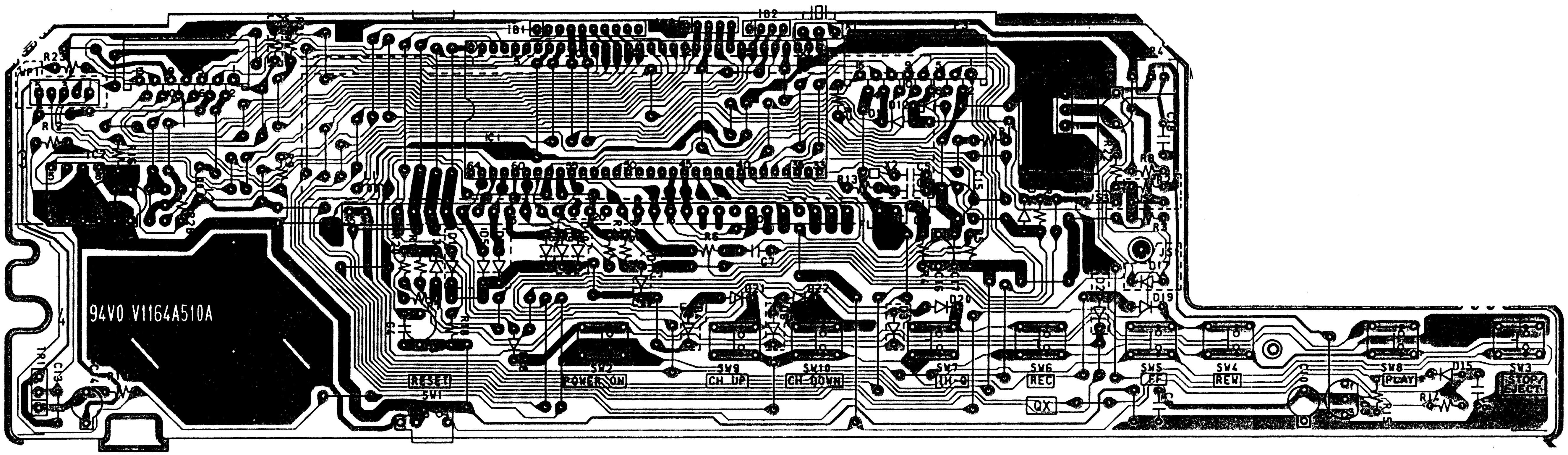
OPERATION (B) PCB V1164A510A

VS-G40EA/EDG/EK/EM/EO
VS-G43EK/EOH
VS-G44EK/EOH-V
VS-G45EOG-V
OPERATION (B)
SCHEMATIC DIAGRAM
NO.19-7 V116807M A2

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN μF
ALL DIODES ARE 1SS131T

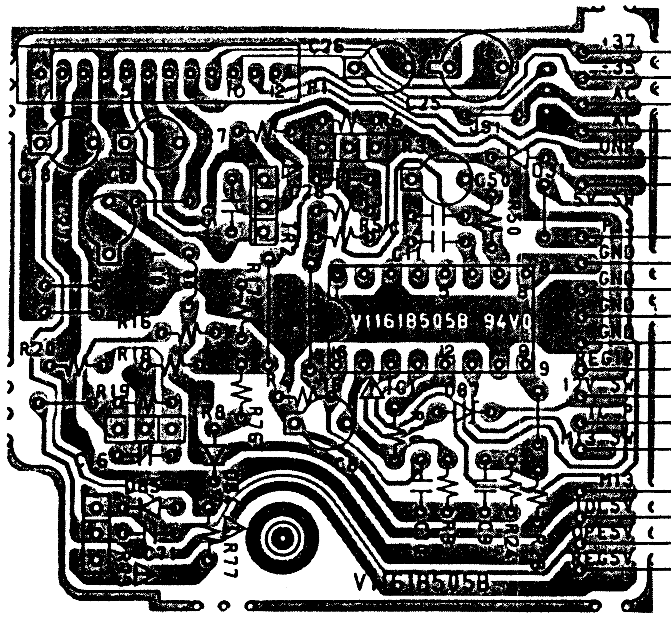
▬ B (POWER SUPPLY) LINE

INDICATED VOLTAGES WERE MEASURED DURING PB MODE.

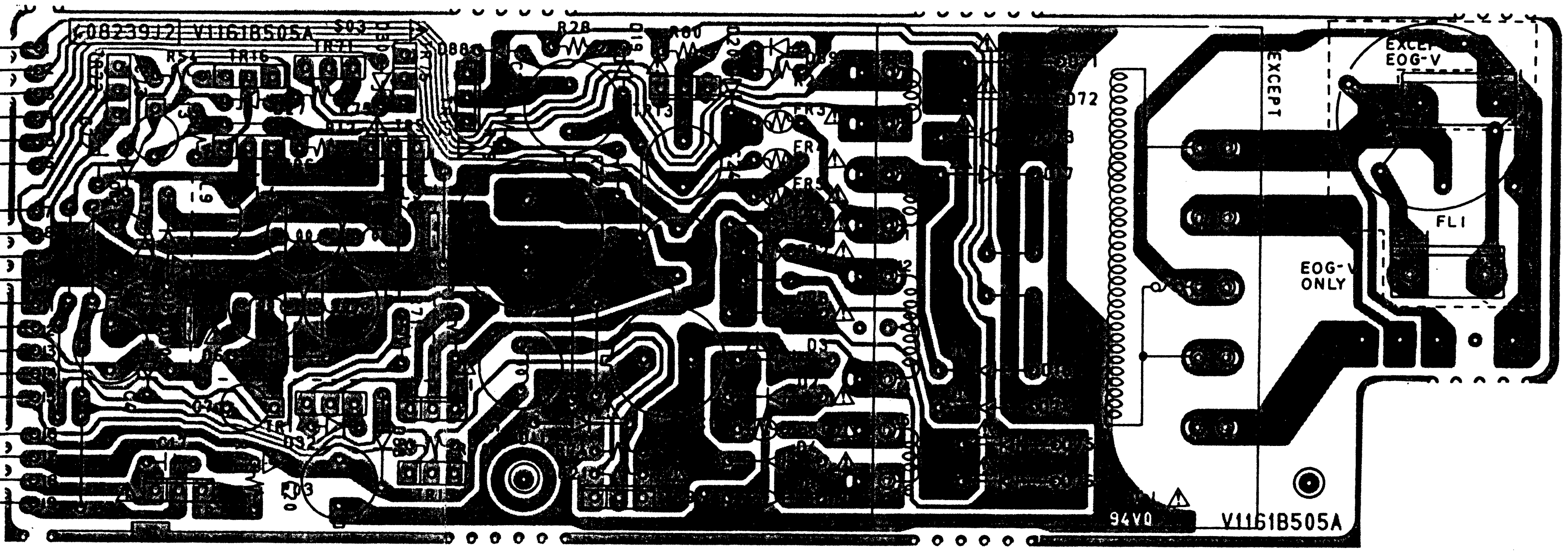

94V0 V1164A510A
RESET
SW1
SW2
POWER ON
SW9
CH UP
SW10
CH DOWN
SW7
SW6
REC
SW5
FF
SW4
REW
SW8
PLAY
SW3
STOP/EJECT
QX
R23
VR1
R19
TR1
C13
IB1
IB2
D15
R17
D19
D17

OPERATION (B) PCB V1164A510A

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER.
REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT
PARTS INFORMATION.


V1161B505B 94V0
V1161B505B

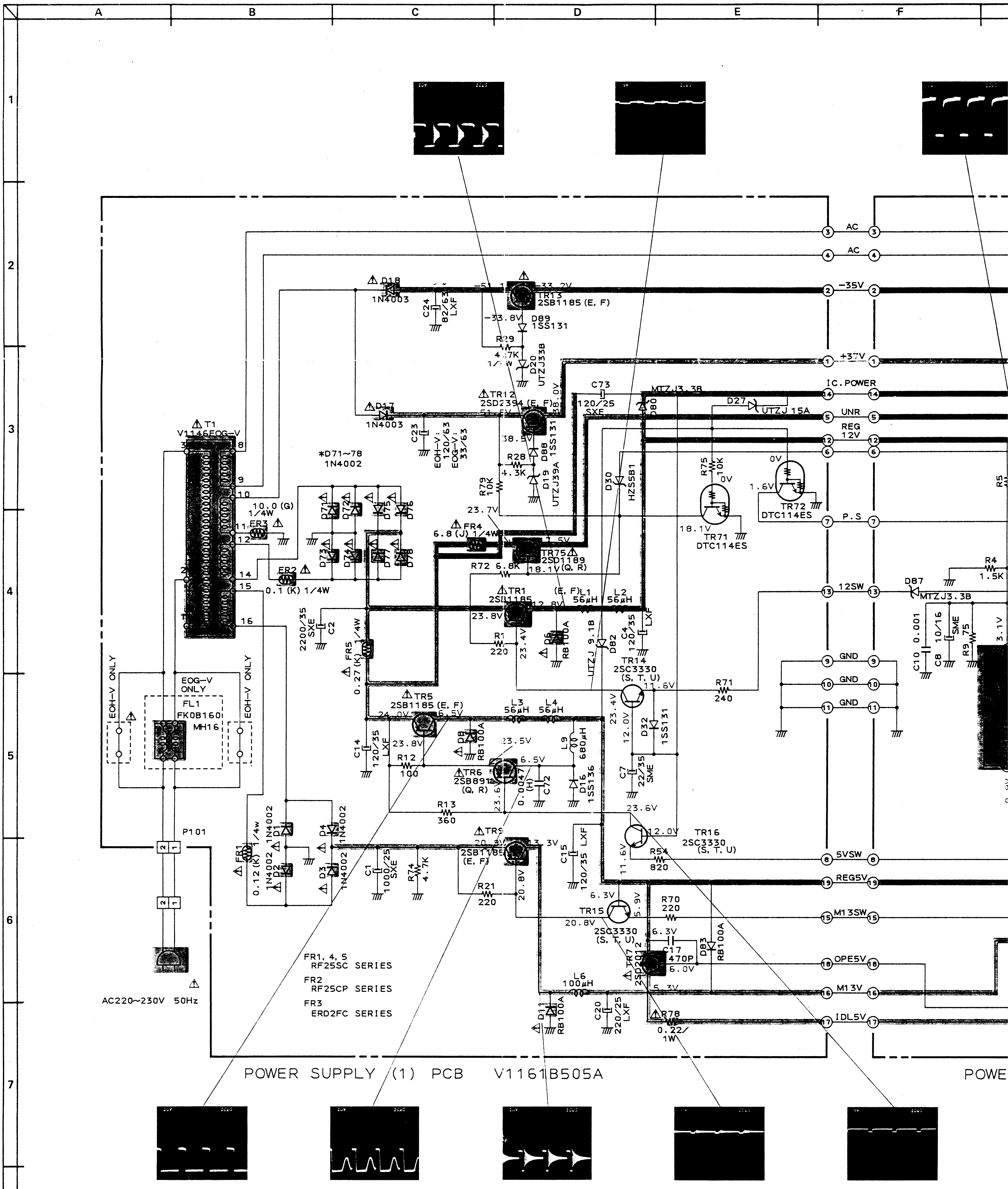
POWER SUPPLY(2)PCB V1161B505B(J3)


V1161B505A
EXCEPT
EXCEPT EOG-V
EOG-V ONLY
FL1
94V0
V1161B505A

POWER SUPPLY(1)PCB V1161B505A(J3)(E0H-V, E0G-V ONLY)

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY,
REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S
RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ.
POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL,
NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

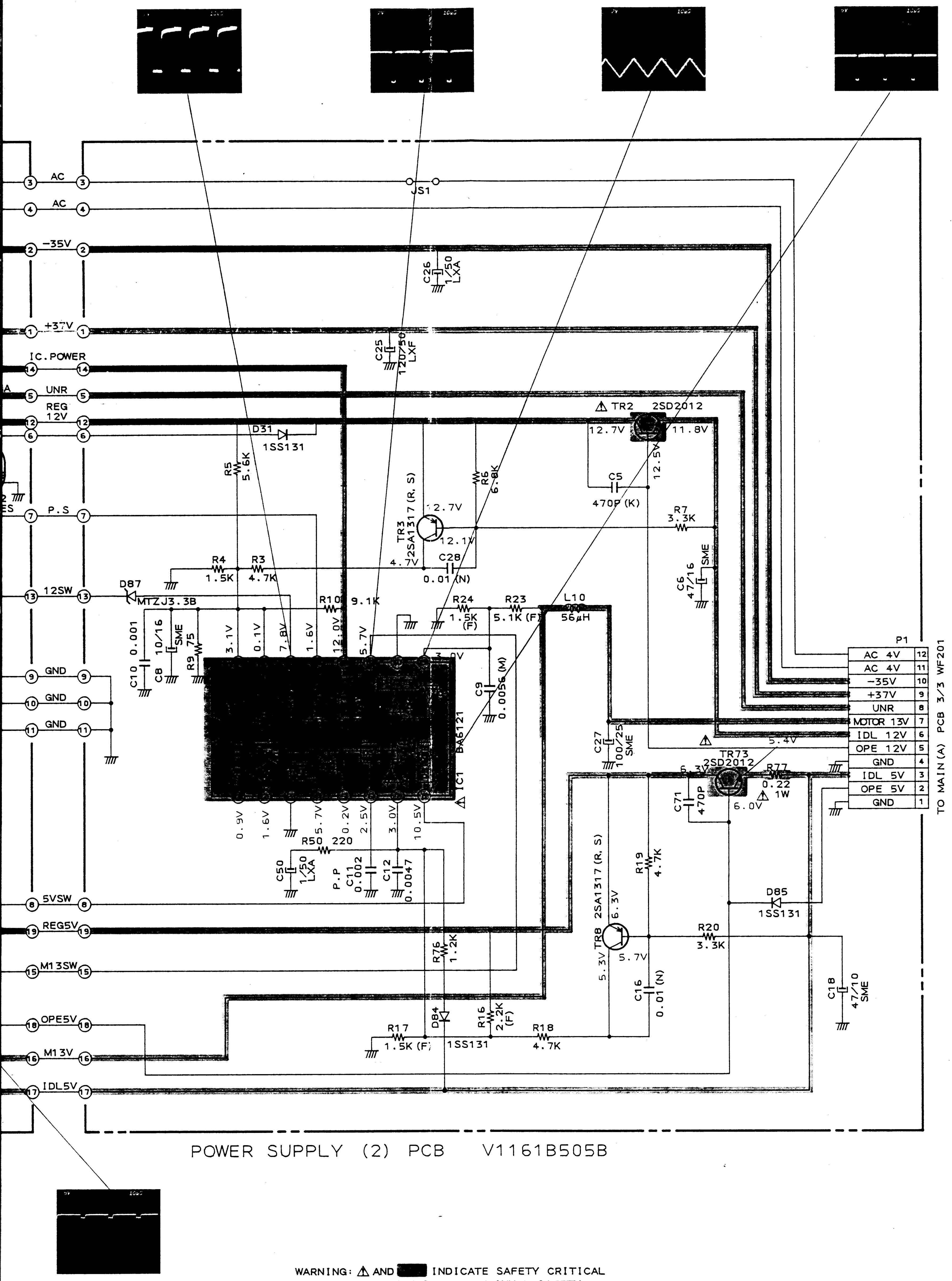

A
B
C
D
E
F
1
2
3
4
5
6
7
8
POWER SUPPLY (1) PCB V1161B505A
POWE
T1
V1146EOG-V
FL1
FK0B160
MH16
EOG-V ONLY
EOH-V ONLY
P101
AC220~230V 50Hz
FR1, 4, 5
RF25SC SERIES
FR2
RF25CP SERIES
FR3
ERD2FC SERIES
*D71~78
1N4002
D18
1N4003
D17
1N4003
TR13
2SB1185 (E, F)
TR12
2SD2394 (E, F)
TR75
2SD1189
(Q, R)
TR1
2SB1185 (E, F)
TR5
2SB1185 (E, F)
TR6
2SB891
(Q, R)
TR9
2SB1185
(E, F)
TR14
2SC3330
(S, T, U)
TR15
2SC3330
(S, T, U)
TR16
2SC3330
(S, T, U)
TR7
2SD2012
TR71
DTC114ES
TR72
DTC114ES
D89
1SS131
D20
UTZJ33B
D88
1SS131
D19
UTZJ39A
D30
HZS5B1
D80
MTZJ3.3B
D27
UTZJ 15A
D82
UTZJ 9.1B
D6
RB100A
D8
RB100A
D16
1SS136
D32
1SS131
D83
RB100A
D11
RB100A
D87
MTZJ3.3B
D1 D2 D3 D4
1N4002
FR1
0.12 (K) 1/4W
FR2
0.1 (K) 1/4W
FR3
10.0 (G)
1/4W
FR4
6.8 (J) 1/4W
FR5
0.27 (K) 1/4W
R78
0.22/
1W
C24
82/63
LXF
C23
EOH-V:
120/63
EOG-V:
33/63
C73
120/25
SXE
C2
2200/35
SXE
C4
120/35
LXF
C14
120/35
LXF
C1
1000/25
SXE
C15
120/35 LXF
C7
22/35
SME
C12
0.0047
(H)
C17
470P
C20
220/25
LXF
C10
0.001
C8
10/16
SME
L1
56μH
L2
56μH
L3
56μH
L4
56μH
L9
680μH
L6
100μH
R29
4.7K
1/4W
R28
4.3K
R79
10K
R72 6.8K
R1
220
R12
100
R13
360
R74
4.7K
R21
220
R71
240
R54
820
R70
220
R75
10K
R4
1.5K
R9
75
-33.2V
-33.8V
38.0V
38.5V
23.7V
18.1V
23.8V
23.4V
12.8V
11.6V
12.0V
24.0V
6.5V
23.5V
23.6V
13.3V
20.8V
6.3V
5.9V
6.0V
5.3V
1.6V
0V
3.1V
AC
-35V
+37V
IC.POWER
UNR
REG
12V
P.S
12SW
GND
5VSW
REG5V
M13SW
OPE5V
M13V
IDL5V

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN μF 50 WV (M)

▬ : B (POWER SUPPLY) LINE

* INDICATED VOLTAGE WERE MEASURED DURI
E-E MODE.

* PHOTOGRAPHS WERE TAKEN DURING E-E MC
THE SCREEN'S FIRST LINE FROM THE BOT
IS DC 0V.


AC
AC
-35V
+37V
IC.POWER
UNR
REG 12V
P.S
12SW
GND
GND
GND
5VSW
REG5V
M13SW
OPE5V
M13V
IDL5V
JS1
C26 1/50 LXA
C25 1200/50 LXF
D31 1SS131
R5 5.6K
R6 6.8K
TR3 2SA1317 (R, S)
12.7V
12.1V
4.7V
C28 0.01 (N)
R4 1.5K
R3 4.7K
D87 MTZJ3.3B
R10 9.1K
R24 1.5K (F)
R23 5.1K (F)
L10 56μH
C10 0.001
C8 10/16 SME
R9 75
3.1V 0.1V 7.8V 1.6V 12.0V 5.7V 3.0V
0.9V 1.6V 5.7V 0.2V 2.5V 3.0V 10.5V
C9 0.0056 (M)
IC1 BA6121
R50 220
C50 1/50 LXA
P.P C11 0.002
C12 0.0047
TR2 2SD2012
12.7V 11.8V 12.5V
C5 470P (K)
R7 3.3K
C6 47/16 SME
C27 100/25 SME
5.4V
TR73 2SD2012
6.3V
R77 0.22 1W
C71 470P
6.0V
TR8 2SA1317 (R, S)
6.3V 5.3V 5.7V
R19 4.7K
D85 1SS131
R20 3.3K
C16 0.01 (N)
C18 47/10 SME
R76 1.2K
D84 1SS131
R16 2.2K (F)
R17 1.5K (F)
R18 4.7K
P1
AC 4V 12
AC 4V 11
-35V 10
+37V 9
UNR 8
MOTOR 13V 7
IDL 12V 6
OPE 12V 5
GND 4
IDL 5V 3
OPE 5V 2
GND 1
TO MAIN (A) PCB 3/3 WF201
POWER SUPPLY (2) PCB V1161B505B

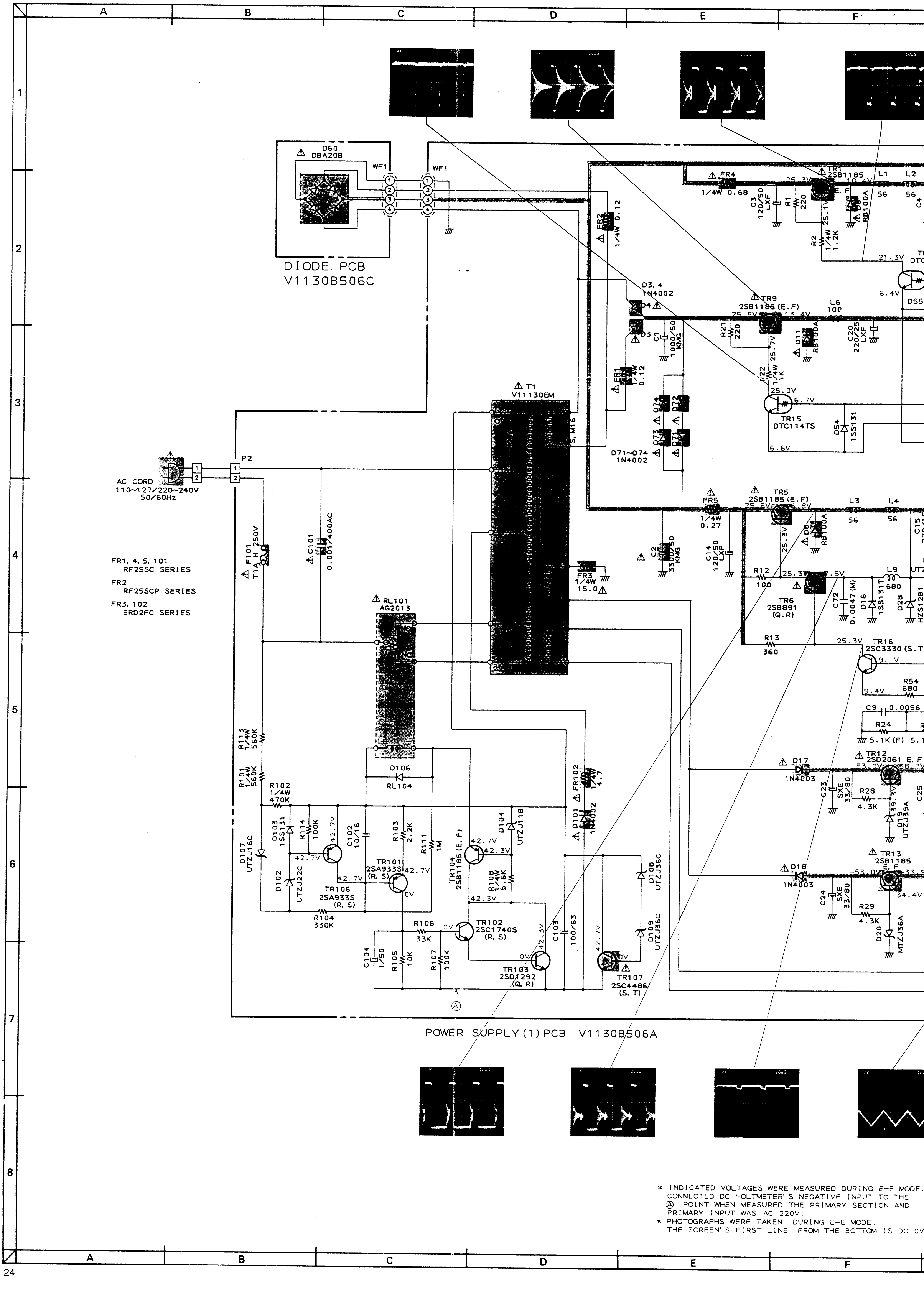
ICATED VOLTAGE WERE MEASURED DURING
E MODE.

TOGRAPHS WERE TAKEN DURING E-E MODE.
E SCREEN'S FIRST LINE FROM THE BOTTOM
DC 0V.

WARNING: ⚠ AND ■ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

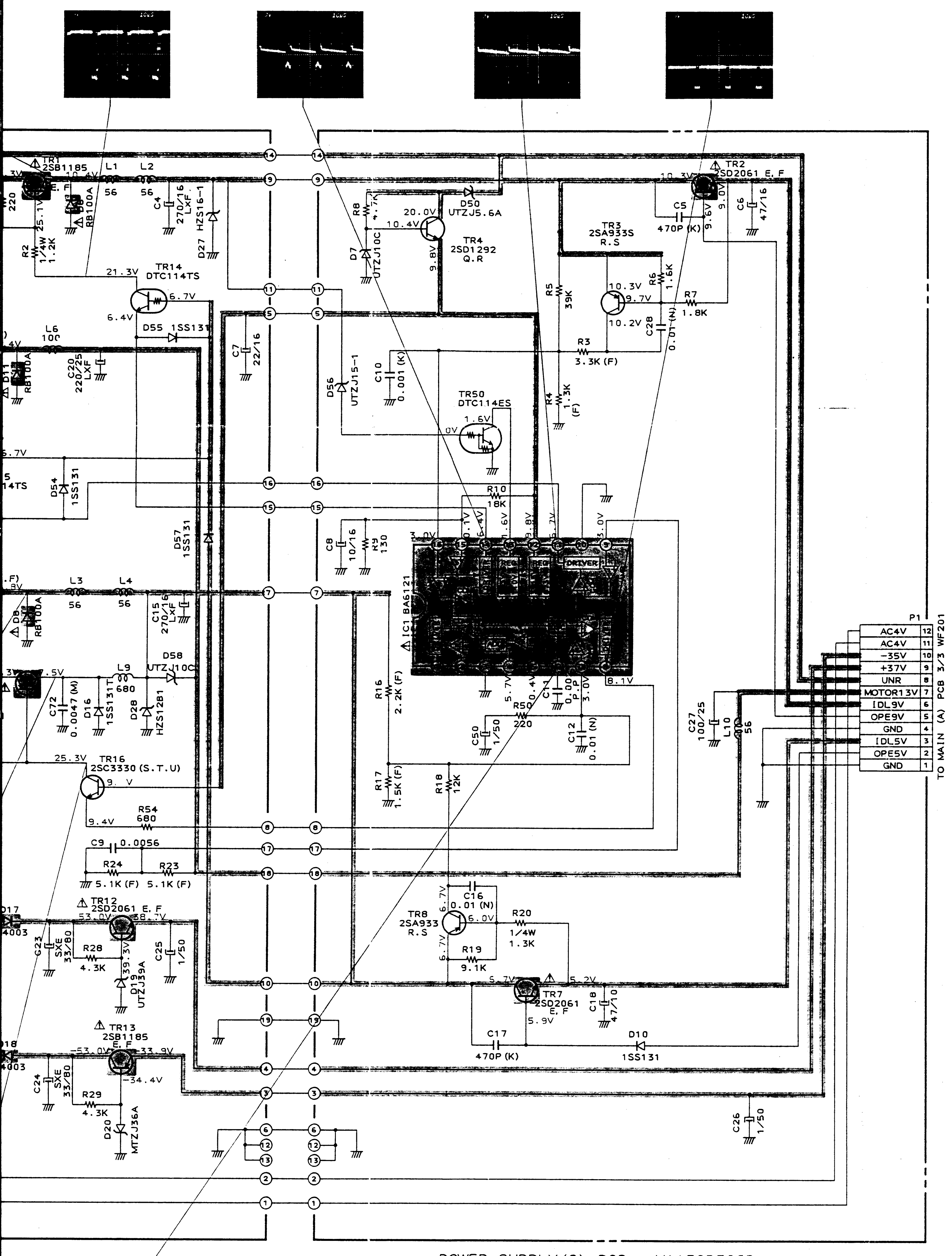
AVERTISSMENT: ⚠ ET ■, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ, POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

POWER SUPPLY
SCHEMATIC DIAGRAM
NO.19-8 V116808M A2

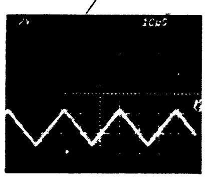

A
B
C
D
E
F
1
2
3
4
5
6
7
8
D60
DBA208
WF1
DIODE PCB
V1130B506C
AC CORD
110~127/220~240V
50/60Hz
P2
F101
T1A H 250V
C101
0.001/400AC
FR1, 4, 5, 101
RF25SC SERIES
FR2
RF25SCP SERIES
FR3, 102
ERD2FC SERIES
T1
V1130EM
RL101
AG2013
D106
RL104
R113
1/4W
560K
R101
1/4W
560K
R102
1/4W
470K
D107
UTZJ16C
D103
1SS131
R114
100K
D102
UTZJ22C
C102
10/16
TR106
2SA933S
(R, S)
R104
330K
TR101
2SA933S
(R, S)
R103
2.2K
R111
1M
TR104
2SB1185 (E, F)
D104
UTZJ11B
R108
1/4W
5.6K
TR102
2SC1740S
(R, S)
R106
33K
C104
1/50
R105
10K
R107
100K
TR103
2SD1292
(Q, R)
C103
100/63
D101
1N4002
FR102
1/4W
4.7
D108
UTZJ36C
D109
UTZJ36C
TR107
2SC4486
(S, T)
42.7V
42.3V
0V
POWER SUPPLY (1) PCB V1130B506A
FR2
1/4W 0.12
D3, 4
1N4002
C1
1000/50
KMG
FR1
1/4W
0.12
D71~D74
1N4002
C2
3300/50
KMG
FR3
1/4W
15.0
FR4
1/4W 0.68
C3
120/50
LXF
R1
220
TR1
2SB1185
R2
1/4W
1.2K
RB100A
L1
56
L2
56
25.3V
25.1V
21.3V
6.4V
D55
TR9
2SB1185 (E.F)
25.8V
13.4V
R21
220
D11
RB100A
L6
100
C20
220/25
LXF
R22
1/4W
1K
25.7V
25.0V
6.7V
TR15
DTC114TS
D54
1SS131
6.6V
FR5
1/4W
0.27
TR5
2SB1185 (E.F)
25.6V
C14
120/50
LXF
D8
RB100A
L3
56
L4
56
R12
100
TR6
2SB891
(Q.R)
C72
0.0047 (M)
D16
1SS131T
L9
680
D28
HZS12B1
R13
360
TR16
2SC3330 (S.T
9. V
9.4V
R54
680
C9
0.0056
R24
5.1K (F)
D17
1N4003
C23
SXE
33/80
TR12
2SD2061 E, F
53.0V
R28
4.3K
D19
UTZJ39A
39.3V
C25
D18
1N4003
C24
SXE
33/80
TR13
2SB1185
E, F
-53.0V
-34.4V
R29
4.3K
D20
MTZJ36A

* INDICATED VOLTAGES WERE MEASURED DURING E-E MODE. CONNECTED DC VOLTMETER'S NEGATIVE INPUT TO THE Ⓐ POINT WHEN MEASURED THE PRIMARY SECTION AND PRIMARY INPUT WAS AC 220V.

* PHOTOGRAPHS WERE TAKEN DURING E-E MODE. THE SCREEN'S FIRST LINE FROM THE BOTTOM IS DC 0V


TR1 2SB1185
L1 56
L2 56
C4 270/16 LXF
D27 HZS16-1
RB100A
R2 1/4W 1.2K
TR14 DTC114TS
21.3V
6.7V
6.4V
D55 1SS131
L6 100
D11 RB100A
C20 220/25 LXF
D54 1SS131
D57 1SS131
C7 22/16
L3 56
L4 56
D8 RB100A
C15 270/16 LXF
L9 680
D58 UTZJ10C
C72 0.0047 (M)
D16 1SS131T
D28 HZS12B1
TR16 2SC3330 (S.T.U)
25.3V
9.4V
R54 680
C9 0.0056
R24 5.1K (F)
R23 5.1K (F)
TR12 2SD2061 E. F
53.0V
38.7V
39.3V
C23 SXE 33/80
R28 4.3K
C25 1/50
D19 UTZJ39A
TR13 2SB1185 E. F
-53.0V
-33.9V
-34.4V
C24 SXE 33/80
R29 4.3K
D20 MTZJ36A
R8 4.7K
D7 UTZJ10C
20.0V
10.4V
9.8V
TR4 2SD1292 Q.R
D50 UTZJ5.6A
D56 UTZJ15-1
C10 0.001 (K)
TR50 DTC114ES
1.6V
0V
R10 18K
C8 10/16
R9 130
IC1 BA6121
DRIVER
R16 2.2K (F)
R17 1.5K (F)
R18 12K
C50 1/50
R50 220
C12 0.01 (N)
8.1V
TR2 2SD2061 E. F
10.3V
9.0V
9.6V
C5 470P (K)
C6 47/16
TR3 2SA933S R.S
R5 39K
R6 1.6K
10.3V
9.7V
10.2V
R7 1.8K
C28 0.01 (N)
R3 3.3K (F)
R4 1.3K (F)
C27 100/25
L10 56
TR8 2SA933 R.S
6.7V
6.0V
C16 0.01 (N)
R20 1/4W 1.3K
R19 9.1K
TR7 2SD2061 E. F
5.7V
5.2V
5.9V
C18 47/10
C17 470P (K)
D10 1SS131
C26 1/50
P1
AC4V 12
AC4V 11
-35V 10
+37V 9
UNR 8
MOTOR13V 7
IDL9V 6
OPE9V 5
GND 4
IDL5V 3
OPE5V 2
GND 1
TO MAIN (A) PCB 3/3 WF201

POWER SUPPLY (2) PCB V1130B506B



WARNING: ⚠ AND ▨ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSMENT: ⚠ ET ▨, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L' APPAREIL. NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

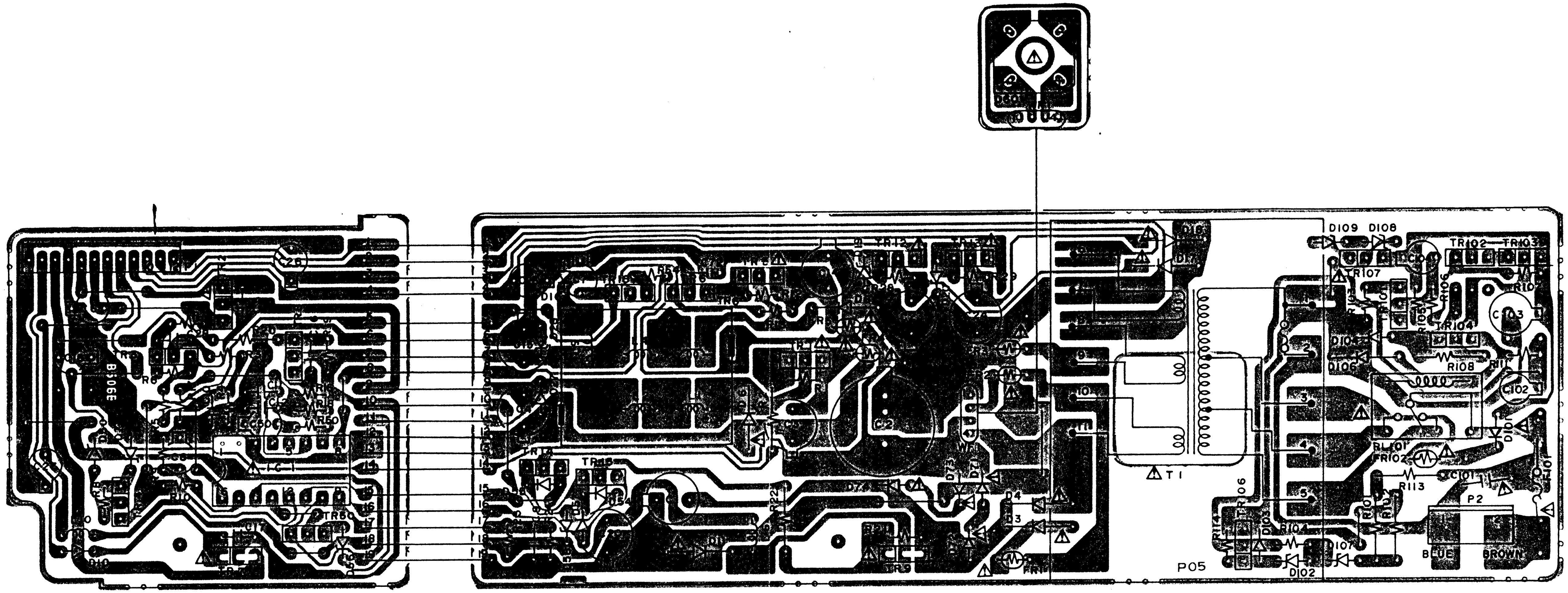
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN µF 50 WV (M)
ALL INDUCTORS IN µH (K)

▬ 3 (POWER SUPPLY LINE)

MEASURED DURING E-E MODE.
NEGATIVE INPUT TO THE
HE PRIMARY SECTION AND
V.
DURING E-E MODE.
FROM THE BOTTOM IS DC 0V.

VS-G40EM
POWER SUPPLY
SCHEMATIC DIAGRAM
NO.19-9 V116403M A1

DIODE PCB
V1130B506C(J4)

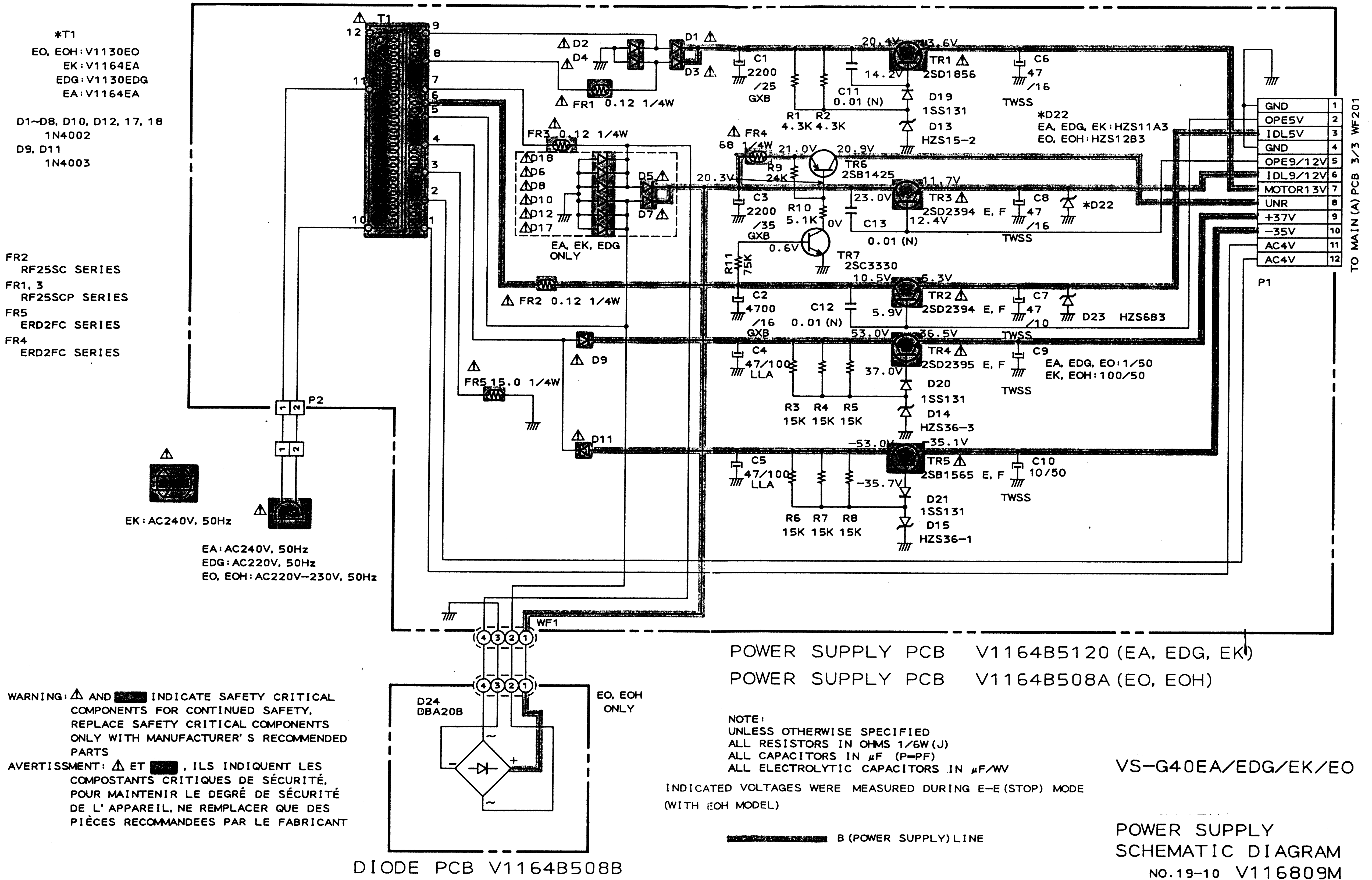

B106E
TR1
R6
R10
D10
TR8
IC-1
D11
TR16
TR12
TR5
TR15
TR14
D73
D74
D4
D3
FR1
C2
T1
D109
D108
TR102
TR103
TR107
TR104
TR106
C103
C102
C104
D105
D106
R108
R113
C101
BL101
FR102
P2
R114
R104
D107
D102
P05
BLUE
BROWN

POWER SUPPLY (2) PCB
V1130B506B(J4)

POWER SUPPLY (1) PCB V1130B506A(J4) (EM ONLY)

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT


*T1
EO, EOH: V1130EO
EK: V1164EA
EDG: V1130EDG
EA: V1164EA
D1~D8, D10, D12, 17, 18
1N4002
D9, D11
1N4003
FR2
RF25SC SERIES
FR1, 3
RF25SCP SERIES
FR5
ERD2FC SERIES
FR4
ERD2FC SERIES
⚠ T1
12
11
10
9
8
7
6
5
4
3
2
1
⚠ D2
⚠ D4
⚠ FR1 0.12 1/4W
D1 ⚠
D3 ⚠
⚠ FR3 0.12 1/4W
⚠ D18
⚠ D6
⚠ D8
⚠ D10
⚠ D12
⚠ D17
D5 ⚠
D7 ⚠
EA, EK, EDG
ONLY
⚠ FR2 0.12 1/4W
⚠ D9
⚠
FR5 15.0 1/4W
⚠ D11
P2
C1
2200
/25
GXB
R1 4.3K
R2 4.3K
C11
0.01 (N)
14.2V
20.4V
13.6V
TR1 ⚠
2SD1856
D19
1SS131
D13
HZS15-2
C6
47
/16
TWSS
*D22
EA, EDG, EK: HZS11A3
EO, EOH: HZS12B3
⚠ FR4
68 1/4W
21.0V
20.9V
TR6
2SB1425
R9
24K
20.3V
C3
2200
/35
GXB
R10
5.1K
0V
23.0V
11.7V
TR3 ⚠
2SD2394 E, F
12.4V
C13
0.01 (N)
C8
47
/16
TWSS
*D22
0.6V
R11
75K
TR7
2SC3330
C2
4700
/16
GXB
C12
0.01 (N)
10.5V
5.3V
5.9V
TR2 ⚠
2SD2394 E, F
C7
47
/10
TWSS
D23 HZS6B3
C4
47/100
LLA
53.0V
36.5V
37.0V
TR4 ⚠
2SD2395 E, F
C9
EA, EDG, EO: 1/50
EK, EOH: 100/50
TWSS
R3 15K
R4 15K
R5 15K
D20
1SS131
D14
HZS36-3
C5
47/100
LLA
-53.0V
-35.1V
-35.7V
TR5 ⚠
2SB1565 E, F
C10
10/50
TWSS
R6 15K
R7 15K
R8 15K
D21
1SS131
D15
HZS36-1
GND 1
OPE5V 2
IDL5V 3
GND 4
OPE9/12V 5
IDL9/12V 6
MOTOR13V 7
UNR 8
+37V 9
-35V 10
AC4V 11
AC4V 12
P1
TO MAIN (A) PCB 3/3 WF201
⚠
EK: AC240V, 50Hz
⚠
EA: AC240V, 50Hz
EDG: AC220V, 50Hz
EO, EOH: AC220V-230V, 50Hz
WF1
4 3 2 1
4 3 2 1
D24
DBA20B
~
-
+
~
EO, EOH
ONLY

DIODE PCB V1164B508B

POWER SUPPLY PCB V1164B5120 (EA, EDG, EK)
POWER SUPPLY PCB V1164B508A (EO, EOH)

WARNING: ⚠ AND ■ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER' S RECOMMENDED PARTS

AVERTISSMENT: ⚠ ET ■ , ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ, POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L' APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

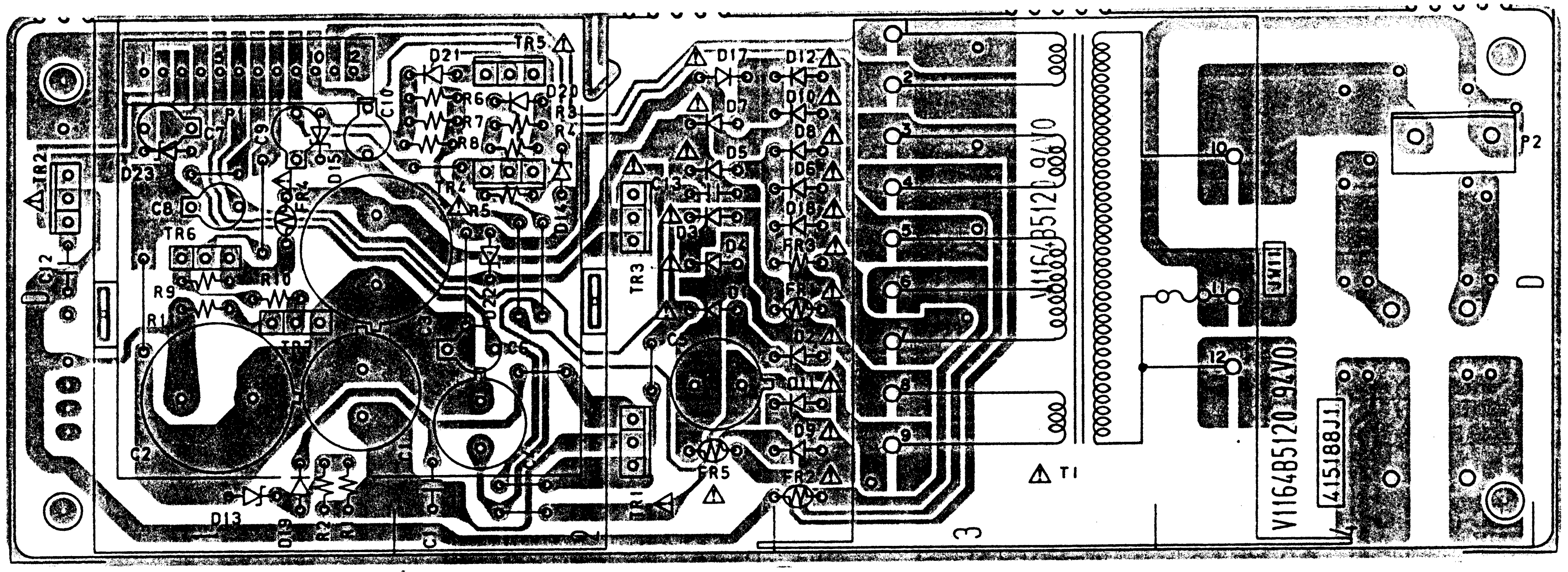
NOTE:
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN μF (P=PF)
ALL ELECTROLYTIC CAPACITORS IN μF/WV

INDICATED VOLTAGES WERE MEASURED DURING E-E (STOP) MODE (WITH EOH MODEL)

▬ B (POWER SUPPLY) LINE

VS-G40EA/EDG/EK/EO

POWER SUPPLY
SCHEMATIC DIAGRAM
NO.19-10 V116809M
A3


TR5
D21
D20
D17
D12
D10
D7
D8
D5
D6
D3
D4
D18
D2
D1
D11
D9
C10
C9
C7
C8
D23
TR2
TR6
R9
R10
R1
C2
C11
C6
D13
D19
D15
D14
D22
TR3
TR1
FR5
FR2
FR3
P2
V1164B5120(J1)
V1164B5120 94V0
4151881J1
T1

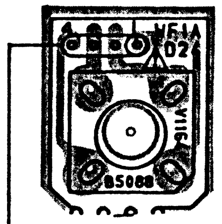
POWER SUPPLY PCB V1164B5120(J1)(EA, EK, EDG ONLY)

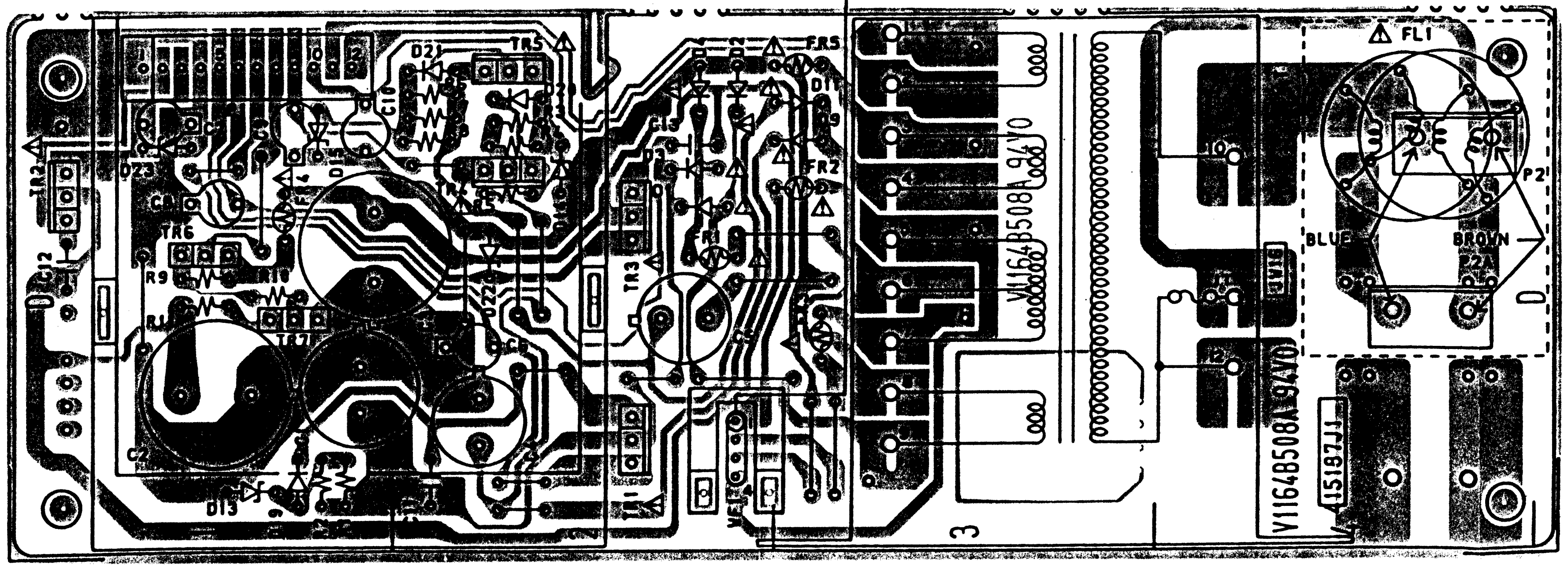
WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY,
REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S
RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ.
POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL,
NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

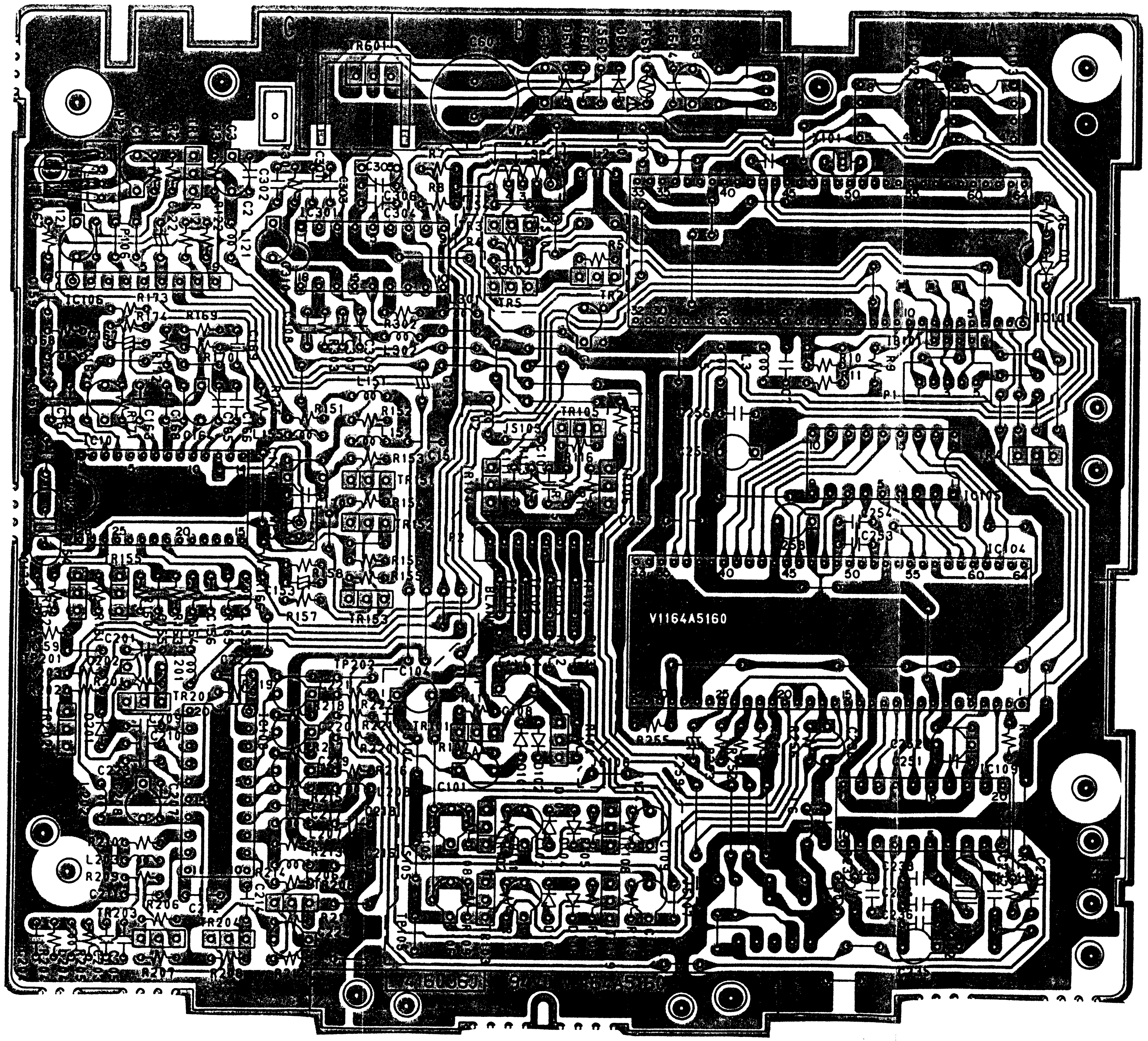
NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER. REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT PARTS INFORMATION.

DIODE PCB
V1164B508B(J1)


VF1A
D24
B5088


TR5
D21
FR5
D1
C10
C13
FR2
FR1
D23
TR2
TR6
R9
R10
R1
TR3
TR1
D13
FL1
P2
BLUE
BROWN
V1164B508A 94V0
V1164B508A(J1)
415187J1

POWER SUPPLY PCB V1164B508A(J1)(EO, EOH ONLY)


V1164A5160
IC101
IC104
IC105
IC106
IC109
IC301
TR601
TR105
TR151
TR153
TR201
TR203
TR204
P1
TP202

VPST/PDC PCB V1164A5160

PRINCIPAL PARTS LOCATION

ICs

IC101	A,B1
IC102	A1
IC103	A1
IC104	A,B3
IC105	A2
IC106	C1
IC107	C2
IC108	C3
IC109	A3
IC301	B,C1

WIREs

WP1	B1
WP2	C1
WP3	C2

CONNECTORs

P1	A2
P601	A,B1

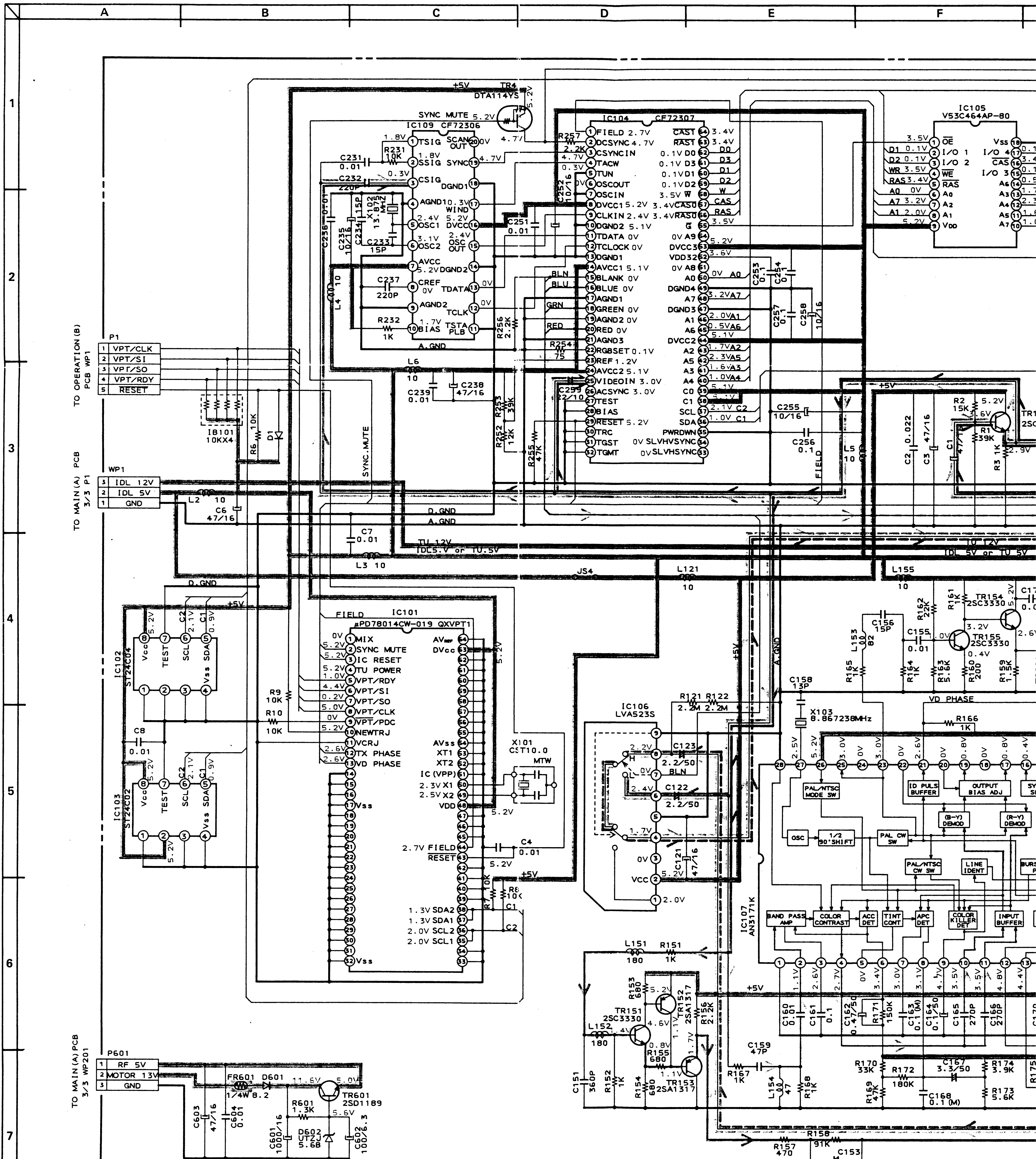
TRANSISTORs

TR1	C1
TR4	A2
TR151	C2
TR152	C2
TR153	C3
TR154	C3
TR155	C3
TR201	C3
TR202	C3
TR203	C4
TR204	C4
TR208	C4
TR601	C1

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER. REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT PARTS INFORMATION.

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

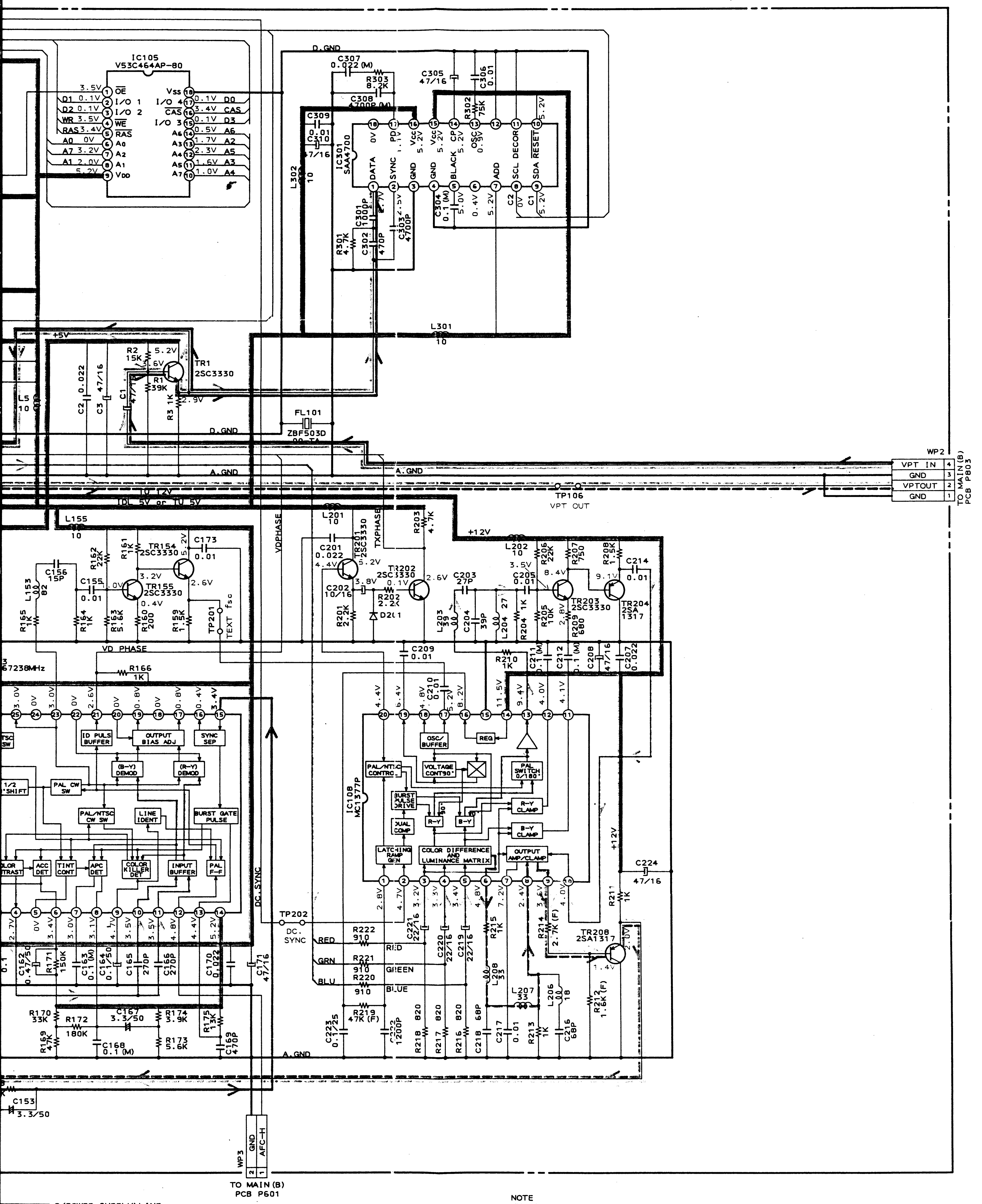

A
B
C
D
E
F
1
2
3
4
5
6
7
IC109 CF72306
IC104 CF72307
IC105 V53C464AP-80
TR4 DTA114YS
SYNC MUTE
X102 13.875MHz
IC101 μPD78014CW-019 QXVPT1
IC102 ST24C04
IC103 ST24C02
IB101 10KX4
X101 CST10.0 MTW
IC106 LVA523S
IC107 AN3171K
X103 8.867238MHz
TR151 2SC3330
TR152 2SA1317
TR153 2SA1317
TR154 2SC3330
TR155 2SC3330
TR601 2SD1189
D602 UTZJ 5.6B
FR601 1/4W 8.2
P1
VPT/CLK
VPT/SI
VPT/SO
VPT/RDY
RESET
TO OPERATION (B) PCB WP1
WP1
IDL 12V
IDL 5V
GND
TO MAIN (A) PCB 3/3 P1
P601
RF 5V
MOTOR 13V
GND
TO MAIN (A) PCB 3/3 WP201
D.GND
A.GND
TU 12V
IDL 5V or TU 5V
VD PHASE
FIELD
PAL/NTSC MODE SW
OSC
1/2 90°SHIFT
PAL CW SW
ID PULS BUFFER
OUTPUT BIAS ADJ
(B-Y) DEMOD
(R-Y) DEMOD
PAL/NTSC CW SW
LINE IDENT
BAND PASS AMP
COLOR CONTRAST
ACC DET
TINT CONT
APC DET
COLOR KILLER DET
INPUT BUFFER

VPST/PDC PCB V1164A5160

WARNING: ⚠ AND ▇ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSMENT: ⚠ ET ▇, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ, POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

━━━ : B (POWER SUPPLY) LINE
─── : Y IN (TUNER) SIGNAL
– – – : Y VPT SIGNAL
-·-·- : CHROMA IN (TUNER) SIGNAL
-··-·· : CHROMA VPT SIGNAL


IC105
V53C464AP-80
IC301
SAA4700
IC108
MC1377P
TR1
2SC3330
TR154
2SC3330
TR155
2SC3330
TR201
2SC3330
TR202
2SC3330
TR203
2SC3330
TR204
2SA1317
TR208
2SA1317
FL101
ZBF503D
L301
10
L302
10
L155
10
L201
10
L202
10
D.GND
A.GND
+5V
+12V
TDL 5V or TU 5V
VD PHASE
VDPHASE
TXPHASE
DC.SYNC
TP106
VPT OUT
TP201
TEXT fsc
TP202
DC.
SYNC
RED
GRN
BLU
WP2
VPT IN
GND
VPTOUT
GND
TO MAIN (B)
PCB P803
WP3
GND
AFC-H
ID PULS BUFFER
OUTPUT BIAS ADJ
SYNC SEP
(B-Y) DEMOD
(R-Y) DEMOD
PAL CW SW
PAL/NTSC CW SW
LINE IDENT
BURST GATE PULSE
ACC DET
TINT CONT
APC DET
COLOR KILLER DET
INPUT BUFFER
PAL F-F
OSC/ BUFFER
REG
VOLTAGE CONT90°
PAL SWITCH 0/180°
PAL/NTSC CONTROL
BURST PULSE DRIVE
R-Y CLAMP
B-Y CLAMP
DUAL COMP
LATCHING RAMP GEN
COLOR DIFFERENCE AND LUMINANCE MATRIX
OUTPUT AMP/CLAMP

TO MAIN (B)
PCB P601

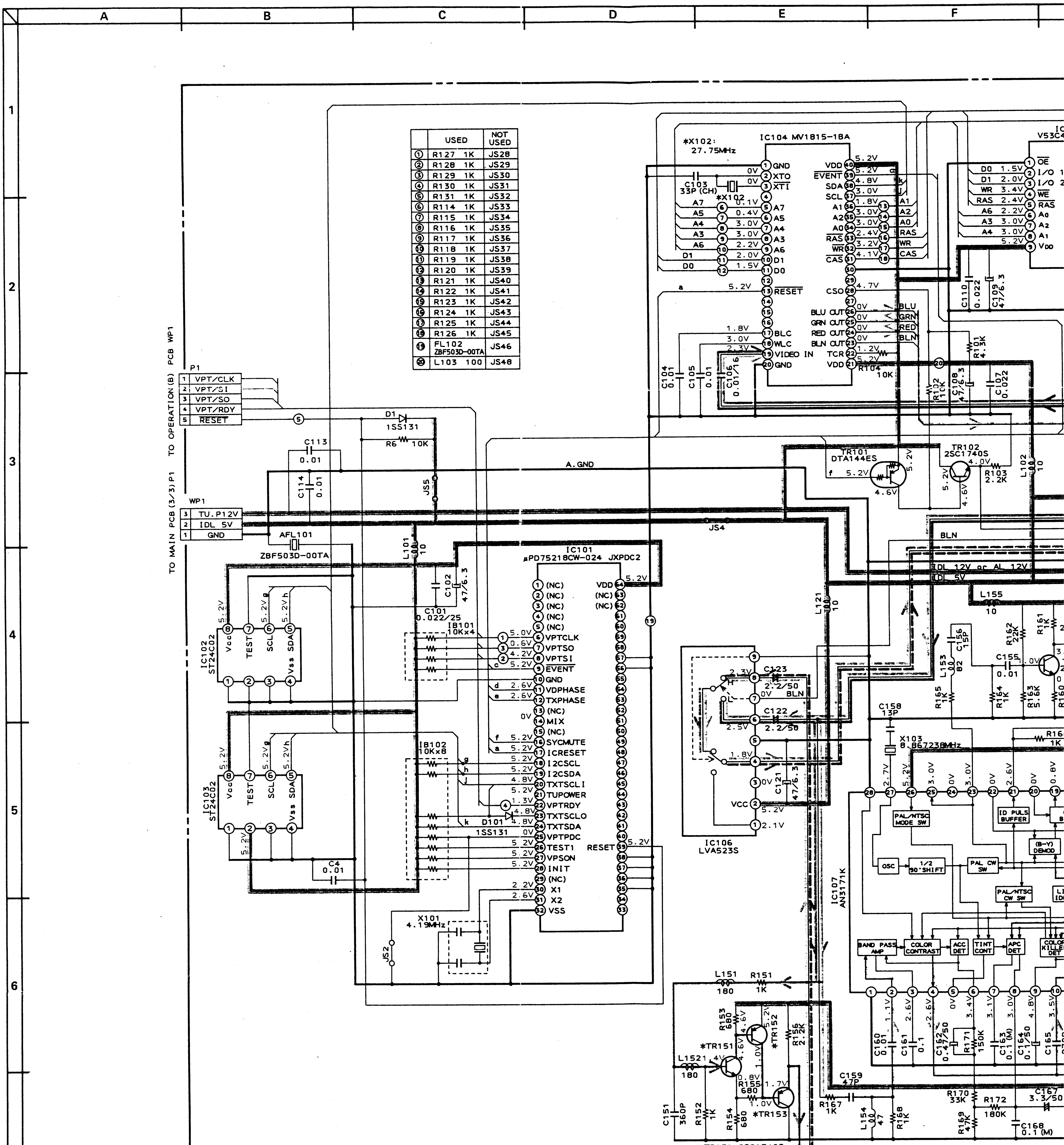
■■■■■■:B (POWER SUPPLY) LINE
———————:Y IN (TUNER) SIGNAL
– – – – – –:Y VPT SIGNAL
—·—·—·—:CHROMA IN (TUNER) SIGNAL
—··—··—:CHROMA VPT SIGNAL

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W
ALL CAPACITORS IN μF
ALL INDUCTORS IN μH
ALL DIODES ARE 1SS131

INDICATED VOLTAGES WERE MEASURED
WHEN A VPT SIGNAL WAS BEING RECEIVED

VPST
SCHEMATIC DIAGRAM

NO.19-11 V116811M
A1



A
B
C
D
E
F
1
2
3
4
5
6
7
TO OPERATION (B) PCB WP1
P1
VPT/CLK
VPT/SI
VPT/SO
VPT/RDY
RESET
TO MAIN PCB (3/3) P1
WP1
TU.P12V
IDL 5V
GND
AFL101
ZBF503D-00TA
C113 0.01
C114 0.01
JS5
JS4
A.GND
D1 1SS131
R6 10K
L101 10
C102 47/6.3
C101 0.022/25
IC102 ST24C02
IC103 ST24C02
Vcc
TEST
SCL
SDA
Vss
C4 0.01
JS2
IB101 10Kx4
IB102 10Kx8
D101 1SS131
X101 4.19MHz
IC101 μPD75218CW-024 JXPDC2
VDD
(NC)
VPTCLK
VPTSO
VPTSI
EVENT
GND
VDPHASE
TXPHASE
MIX
SYCMUTE
ICRESET
I2CSCL
I2CSDA
TXTSCLI
TUPOWER
VPTRDY
TXTSCLO
TXTSDA
VPTPDC
TEST1
VPSON
INIT
X1
X2
VSS
RESET
*X102: 27.75MHz
IC104 MV1815-18A
C103 33P (CH)
GND
XTO
XTI
A7
A5
A4
A3
A6
D1
D0
RESET
BLC
WLC
VIDEO IN
CSO
BLU OUT
GRN OUT
RED OUT
BLN OUT
TCR
VDD
EVENT
SDA
SCL
A1
A2
A0
RAS
WR
CAS
R104 10K
C104 0.01
C105 0.01
C106 0.01/16
C110 0.022
C109 47/6.3
R101 4.3K
R132 10K
C108 47/6.3
C107 0.022
TR101 DTA144ES
TR102 2SC1740S
R103 2.2K
L102 10
BLN
IDL 12V or AL 12V
IDL 5V
L155 10
L121 10
IC106 LVA523S
C123 2.2/50
C122 2.2/50
C121 47/6.3
VCC
C156 15P
L153 82
R162 22K
R161 1K
C155 0.01
R165 1K
R164 1K
R163 5.6K
C158 13P
X103 8.867238MHz
IC107 AN3171K
PAL/NTSC MODE SW
ID PULS BUFFER
(B-Y) DEMOD
OSC
1/2 90°SHIFT
PAL CW SW
PAL/NTSC CW SW
BAND PASS AMP
COLOR CONTRAST
ACC DET
TINT CONT
APC DET
COLOR KILLER DET
L151 180
R151 1K
R153 680
*TR151
*TR152
*TR153
R156 2.2K
L1521 180
R155 680
C151 360P
R152 1K
R154 680
C159 47P
R167 1K
L154 47
R158 1K
C160 0.01
C161 0.1
C162 0.47/50
R171 150K
C163 0.1 (M)
C164 0.1/50
R170 33K
R172 180K
R169 4.7K
C167 3.3/50
C168 0.1 (M)
R157 470
R158 91K
C153 3.3/50
*TR151: 2SC1740S
TR152, 153: 2SA933S
IC V53C4
OE
I/O
WE
RAS
VDD

	USED	NOT USED
①	R127 1K	JS28
②	R128 1K	JS29
③	R129 1K	JS30
④	R130 1K	JS31
⑤	R131 1K	JS32
⑥	R114 1K	JS33
⑦	R115 1K	JS34
⑧	R116 1K	JS35
⑨	R117 1K	JS36
⑩	R118 1K	JS37
⑪	R119 1K	JS38
⑫	R120 1K	JS39
⑬	R121 1K	JS40
⑭	R122 1K	JS41
⑮	R123 1K	JS42
⑯	R124 1K	JS43
⑰	R125 1K	JS44
⑱	R126 1K	JS45
⑲	FL102 ZBF503D-00TA	JS46
⑳	L103 100	JS48

VPST/PDC PCB V1154B5160

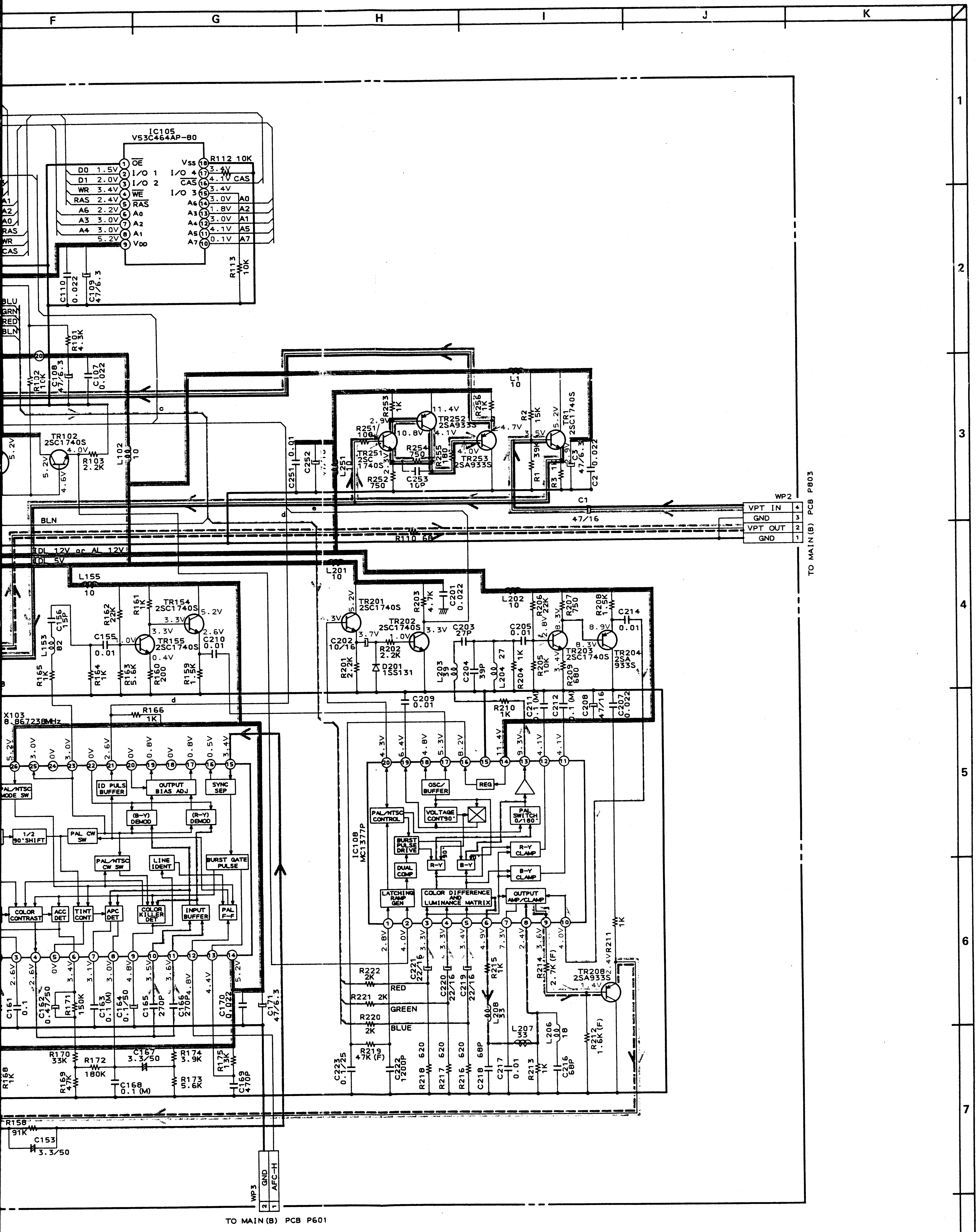
B (POWER SUPPLY) LINE

Y IN (TUNER) SIGNAL

Y VPT SIGNAL

CHROMA IN (TUNER) SIGNAL

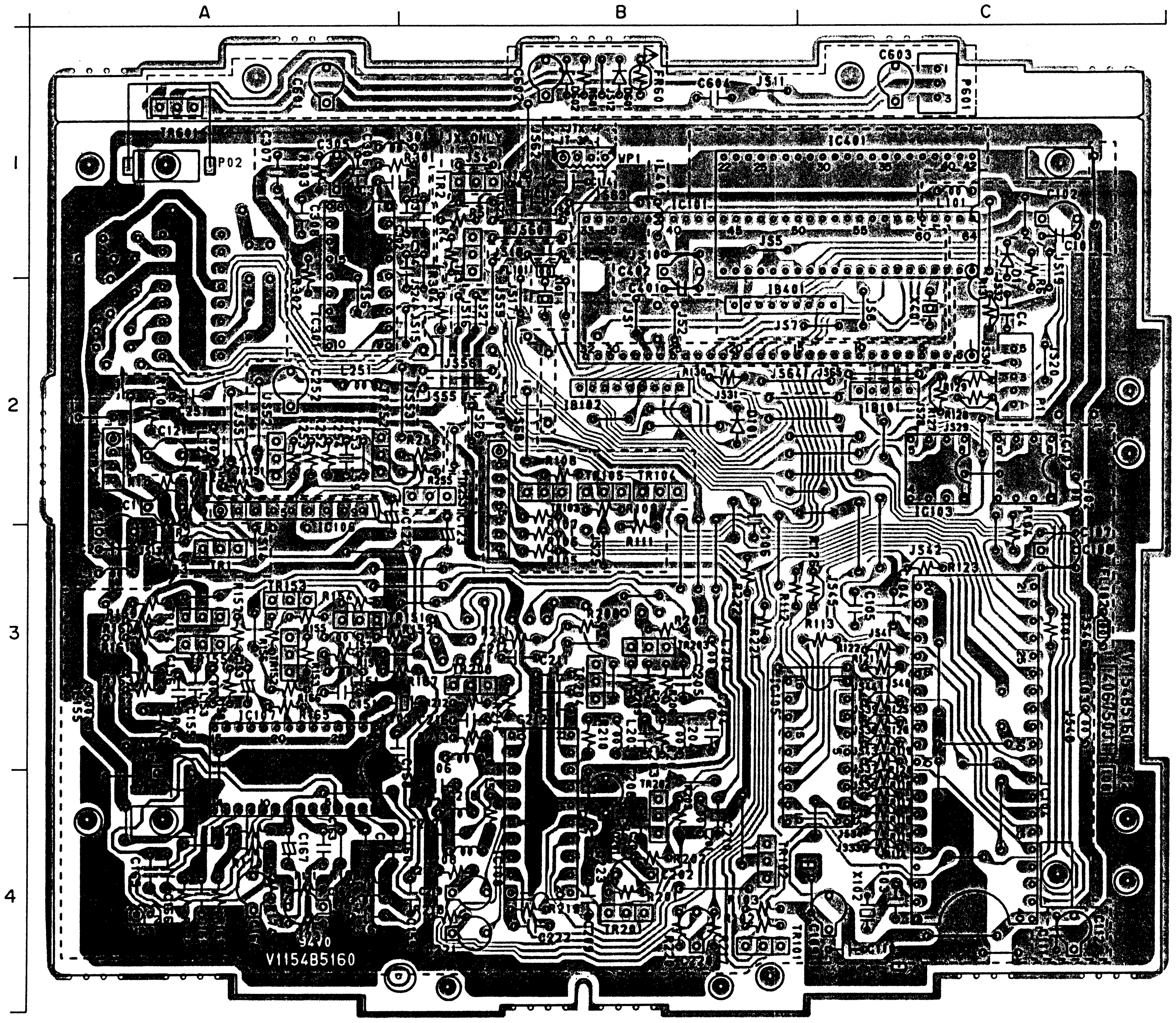
CHROMA VPT SIGNAL


IC105
V53C464AP-80
IC108
MC1377P
TR102 2SC1740S
TR154 2SC1740S
TR155 2SC1740S
TR201 2SC1740S
TR202 2SC1740S
TR203 2SC1740S
TR204 2SA933S
TR208 2SA933S
TR251 2SC1740S
TR252 2SA933S
TR253 2SA933S
TR1 2SC1740S
D201 1SS131
X103 8.867238MHz
WP2
VPT IN
GND
VPT OUT
GND
TO MAIN(B) PCB P803
WP3
GND
AFC-H
TO MAIN(B) PCB P601
PAL/NTSC MODE SW
ID PULS BUFFER
OUTPUT BIAS ADJ
SYNC SEP
(B-Y) DEMOD
(R-Y) DEMOD
1/2 90°SHIFT
PAL CW SW
PAL/NTSC CW SW
LINE IDENT
BURST GATE PULSE
COLOR CONTRAST
ACC DET
TINT CONT
APC DET
COLOR KILLER DET
INPUT BUFFER
PAL F-F
OSC/BUFFER
REG
PAL/NTSC CONTROL
VOLTAGE CONT90°
PAL SWITCH 0/180°
BURST PULSE DRIVE
R-Y
B-Y
R-Y CLAMP
B-Y CLAMP
DUAL COMP
LATCHING RAMP GEN
COLOR DIFFERENCE AND LUMINANCE MATRIX
OUTPUT AMP/CLAMP
RED
GREEN
BLUE
BLU
GRN
RED
BLN
DL 12V or AL 12V
DL 5V
R110 68
C1 47/16
L1 10
L102 10
L155 10
L201 10
L202 10
F G H I J K
1 2 3 4 5 6 7 8

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN µF

INDICATED VOLTAGES WERE MEASURED
WHEN A VPT SIGNAL WAS BEING RECEIVED.

PDC
SCHEMATIC DIAGRAM
No.19-12 V117004M


A
B
C
1
2
3
4
C603
P601
C604
J511
IC401
IC101
WP1
P02
IC102
IC103
IC105
IC107
IB401
IB101
IB102
TR1
TR153
TR101
X101
V1154B5160

VPST / PDC PCB V1154B5160J1

PRINCIPAL PARTS LOCATION

ICs

IC101	B,C1,2
IC102	C2
IC103	C2
IC104	C3,4
IC105	C3,4
IC106	A2
IC107	A3,4
IC108	B3,4

WIREs

WP1	B1
WP2	A2
WP3	A4

CONNECTOR

P1	C2

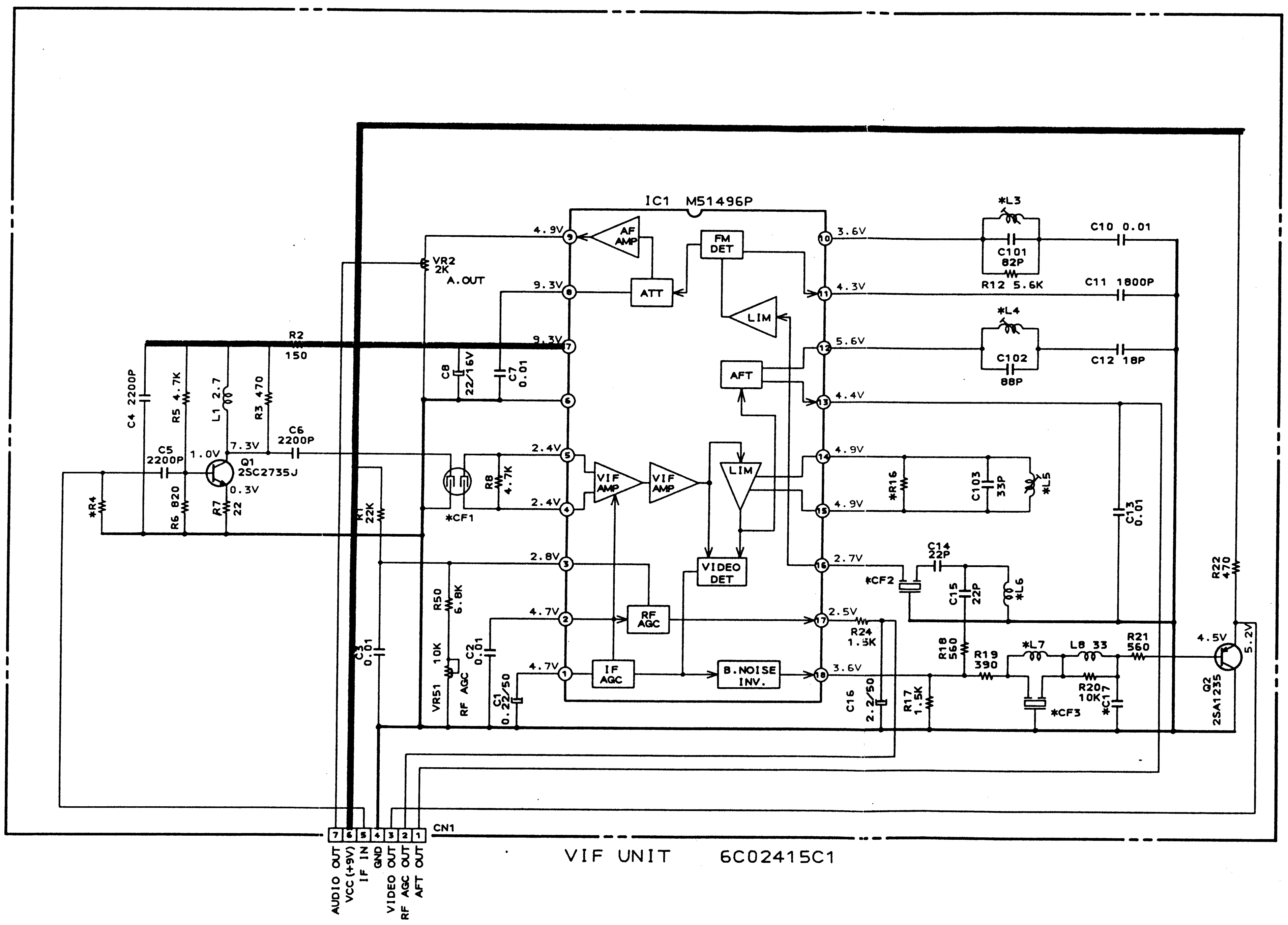
TRANSISTORs

TR1	A1
TR101	B4
TR102	B4
TR151	A3
TR152	A3
TR153	A3
TR154	A3
TR155	A3
TR201	B4
TR202	B4
TR203	B3
TR204	B3
TR208	B3
TR251	A2
TR252	A2
TR253	B2

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER. REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT PARTS INFORMATION.


IC1 M51496P
AF AMP
FM DET
ATT
LIM
AFT
VIF AMP
VIF AMP
LIM
VIDEO DET
RF AGC
IF AGC
B.NOISE INV.
VR2 2K A.OUT
R2 150
C4 2200P
R5 4.7K
L1 2.7
R3 470
C6 2200P
C5 2200P
Q1 2SC2735J
1.0V
7.3V
0.3V
R6 820
R7 22
*R4
R1 22K
C8 22/16V
C7 0.01
R8 4.7K
*CF1
R50 6.8K
VR51 10K RF AGC
C2 0.01
C3 0.01
C1 0.22/50
4.9V
9.3V
9.3V
2.4V
2.4V
2.8V
4.7V
4.7V
3.6V
4.3V
5.6V
4.4V
4.9V
4.9V
2.7V
2.5V
3.6V
*L3
C101 82P
R12 5.6K
C10 0.01
C11 1800P
*L4
C102 88P
C12 18P
*R16
C103 33P
*L5
C13 0.01
C14 22P
*CF2
C15 22P
*L6
R24 1.5K
C16 2.2/50
R17 1.5K
R18 560
R19 390
*L7
L8 33
R20 10K
*C17
*CF3
R21 560
R22 470
4.5V
5.2V
Q2 2SA1235
CN1
7 6 5 4 3 2 1
AUDIO OUT
VCC(+9V)
IF IN
GND
VIDEO OUT
RF AGC OUT
AFT OUT
VIF UNIT 6C02415C1

*	EA	EM	EOH, EOH–V	EK
CF1	SAF36.9MZ70Z	SAF38.9 MZ70Z	SAF38.9 MZW70Z	SAF39.5MZ70Z
CF2	SFE5.5MBF	←	←	SFE6.0MBF
CF3	TPS5.5MW	TPS 5.5MB2	TPS 5.5MW	TPS6.0MB2
L 3	6F16437A1	←	←	6F16437A2
L 4	6F16436A2	6F16435 A1	←	6F1621436A2
L 5	6F16441A1	6F16436 A1	←	6F16346A1
L 6	18µ	←	←	15µ
L 7	18µ	←	15µ	←
R 4	150	100	←	180
R16	10K	←	NONE	10K
C17	CH12P	←	←	CH15P

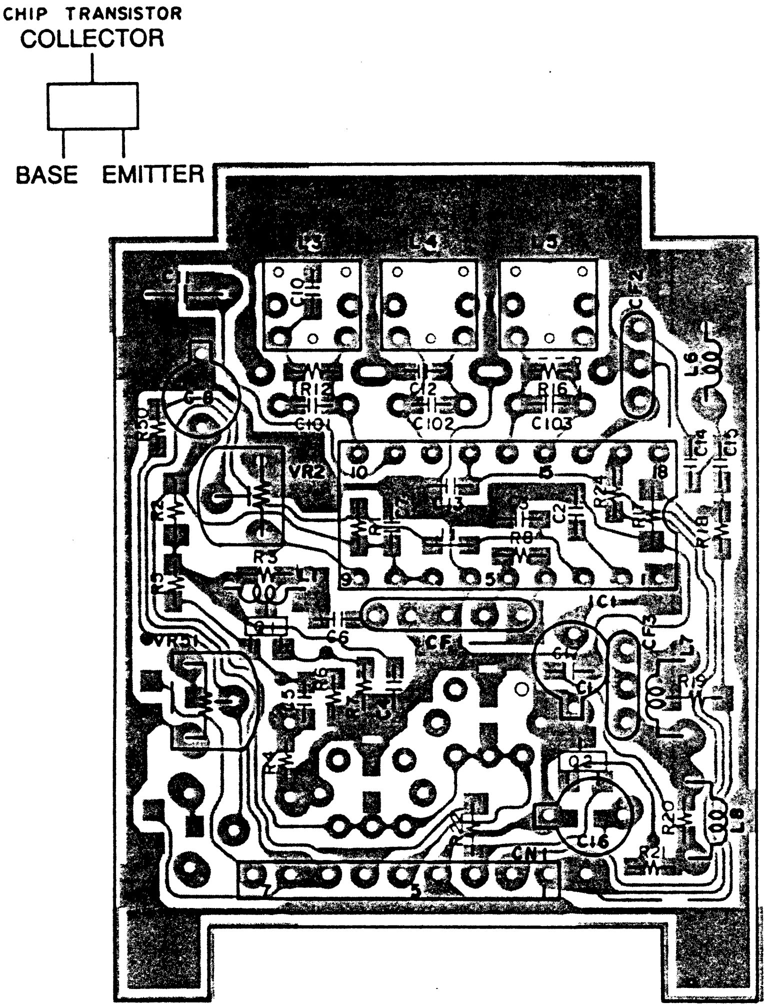
▬ B (POWER SUPPLY) LINE

INDICATED VOLTAGES WERE MEASURED
DURING E–E (STOP) MODE.
(WHEN A STATION IS TUNED)

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN µF
ALL INDUCTORS IN µH (K)

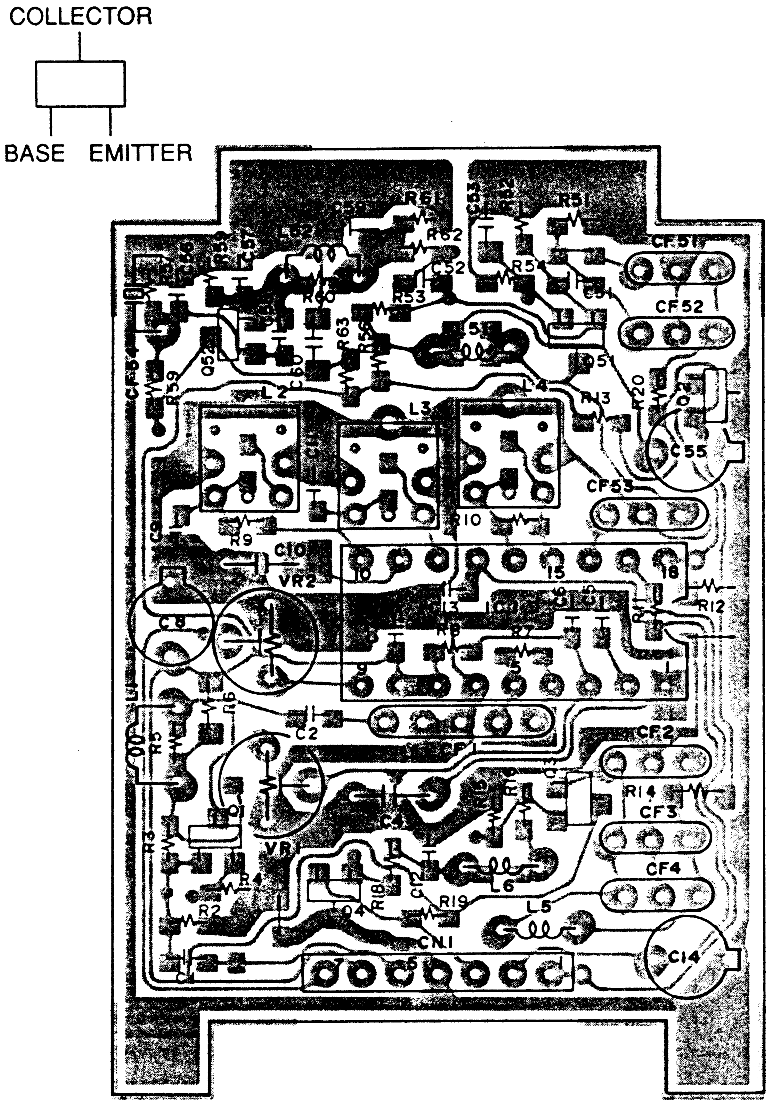
VS–G40EA/EK/EM

VIF UNIT
SCHEMATIC DIAGRAM
NO.19–13 V116810M A3

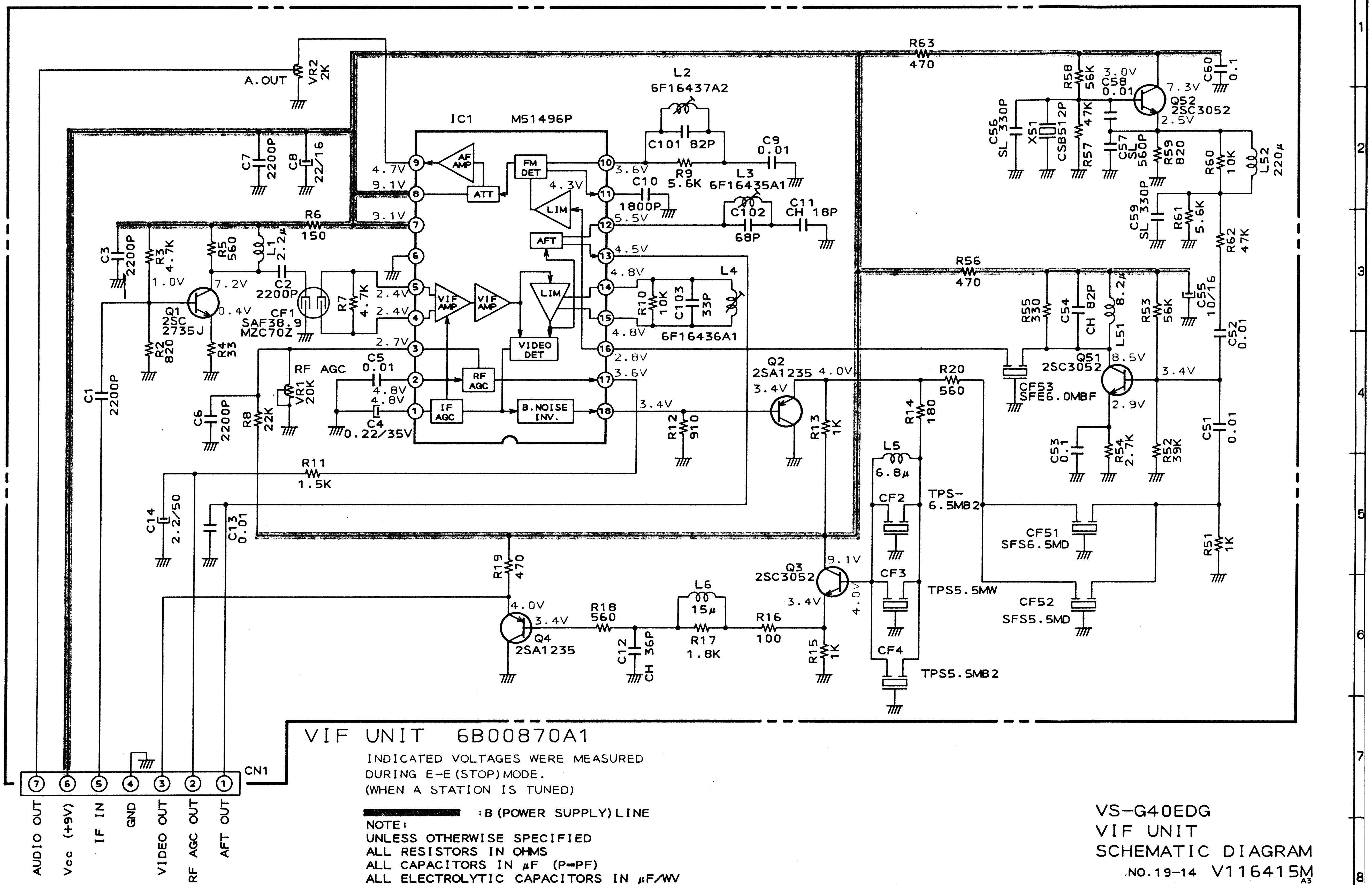

CHIP TRANSISTOR
COLLECTOR
BASE
EMITTER
L3
L4
L5
CF2
L6
C10
R12
C12
R16
C101
C102
C103
C14
C15
C8
R30
VR2
R2
R3
R7
R8
R17
R18
C2
L1
IC1
10
15
18
9
5
1
CF1
C6
VR31
CF3
L7
R19
C17
R5
R6
R4
Q2
C16
R20
L8
R21
CN1
7

VIF UNIT 6C02415CI

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER. REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT PARTS INFORMATION.


COLLECTOR
BASE
EMITTER
R61
C53
R52
R51
R62
C52
R54
CF51
L52
R53
C51
CF52
R60
L51
Q51
R63
R56
C50
Q52
R59
CF54
L2
L3
L4
R13
R20
C55
CF53
R10
R9
C10
VR2
10
15
18
IC1
R12
R11
R8
R7
C8
9
R6
R5
C2
CF2
R14
CF3
VR1
C4
L6
CF4
R3
R4
R18
R19
R2
Q4
L5
CN1
C14

VIF UNIT 6B00870A1


A.OUT
VR2 2K
IC1 M51496P
AF AMP
ATT
FM DET
LIM
AFT
VIF AMP
VIF AMP
LIM
VIDEO DET
RF AGC
IF AGC
B.NOISE INV.
4.7V
9.1V
9.1V
3.6V
4.3V
5.5V
4.5V
4.8V
4.8V
2.8V
3.6V
3.4V
2.4V
2.4V
2.7V
4.8V
4.8V
L2 6F16437A2
C101 82P
C9 0.01
R9 5.6K
C10 1800P
L3 6F16435A1
C102 68P
C11 CH 18P
L4
R10 10K
C103 33P
6F16436A1
C7 2200P
C8 22/16
R6 150
C3 2200P
R3 4.7K
R5 560
L1 2.2μ
C2 2200P
1.0V
7.2V
0.4V
Q1 2SC 2735J
CF1 SAF38.9 MZC70Z
R7 4.7K
R2 820
R4 33
C1 2200P
RF AGC
VR1 20K
C5 0.01
C4 0.22/35V
C6 2200P
R8 22K
R11 1.5K
R12 910
C14 2.2/50
C13 0.01
Q2 2SA1235
4.0V
3.4V
R13 1K
R63 470
R58 56K
C58 0.01
3.0V
7.3V
Q52 2SC3052
2.5V
C60 0.1
C56 SL 330P
X51 CSB512P
R57 47K
C57 SL 560P
R59 820
R60 10K
L52 220μ
C59 SL 330P
R61 5.6K
R62 47K
R56 470
R55 330
C54 CH 82P
L51 8.2μ
R53 56K
C55 10/16
C52 0.01
CF53 SFE6.0MBF
Q51 2SC3052
8.5V
3.4V
2.9V
R20 560
R14 180
C53 0.1
R54 2.7K
R52 39K
C51 0.01
L5 6.8μ
CF2
TPS-6.5MB2
CF51 SFS6.5MD
CF52 SFS5.5MD
R51 1K
CF3
TPS5.5MW
CF4
TPS5.5MB2
Q3 2SC3052
9.1V
3.4V
4.0V
R15 1K
R16 100
L6 15μ
R17 1.8K
R18 560
C12 CH 36P
R19 470
4.0V
3.4V
Q4 2SA1235
CN1
AUDIO OUT
Vcc (+9V)
IF IN
GND
VIDEO OUT
RF AGC OUT
AFT OUT

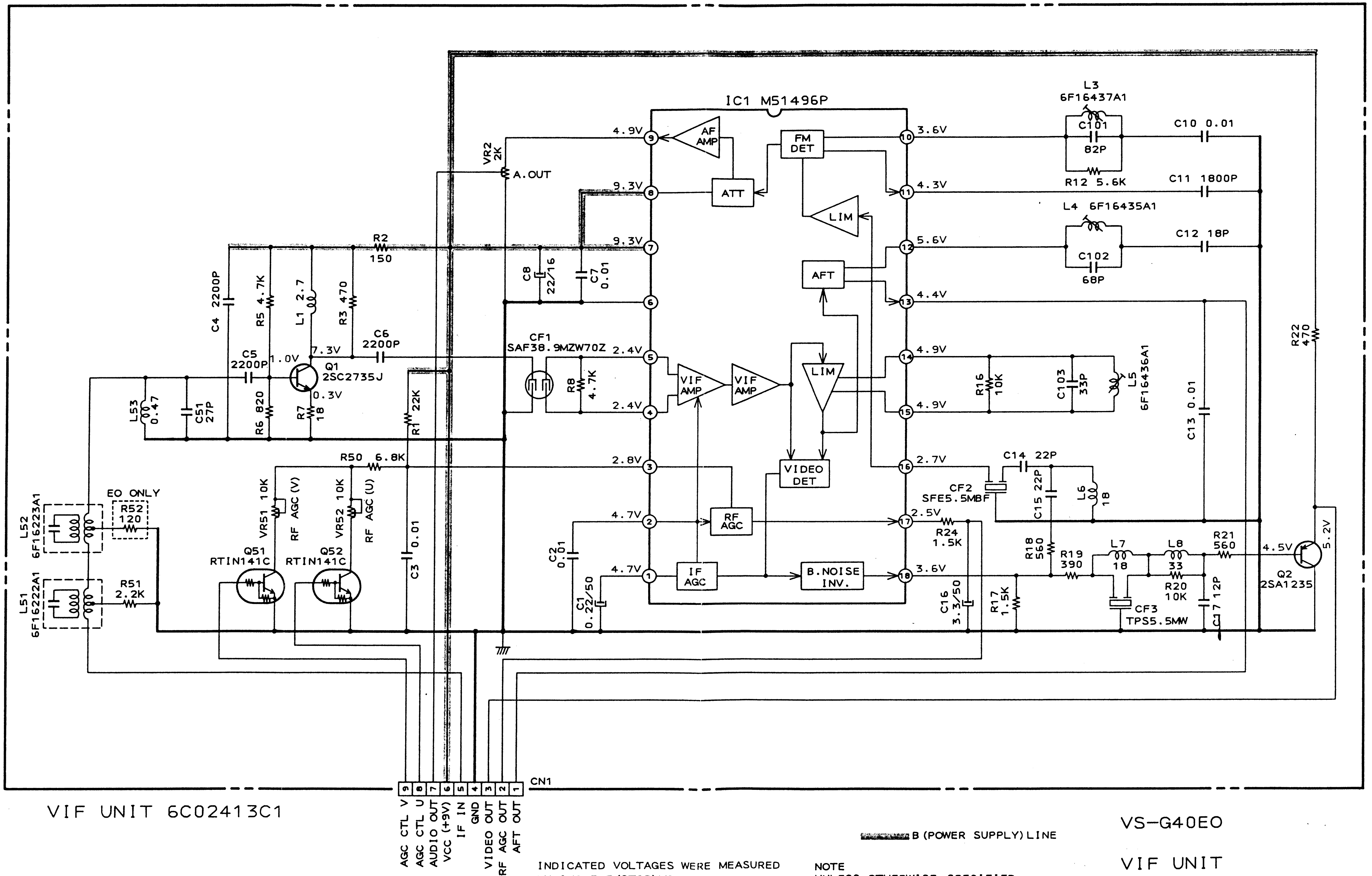
VIF UNIT 6B00870A1

INDICATED VOLTAGES WERE MEASURED
DURING E-E (STOP) MODE.
(WHEN A STATION IS TUNED)

▬▬▬ : B (POWER SUPPLY) LINE

NOTE:
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN μF (P=PF)
ALL ELECTROLYTIC CAPACITORS IN μF/WV

VS-G40EDG
VIF UNIT
SCHEMATIC DIAGRAM
NO.19-14 V116415M A3


IC1 M51496P
AF AMP
ATT
FM DET
LIM
AFT
VIF AMP
VIF AMP
LIM
VIDEO DET
RF AGC
IF AGC
B.NOISE INV.
4.9V
9.3V
9.3V
2.4V
2.4V
2.8V
4.7V
4.7V
3.6V
4.3V
5.6V
4.4V
4.9V
4.9V
2.7V
2.5V
3.6V
VR2 2K
A.OUT
R2 150
C8 22/16
C7 0.01
C4 2200P
R5 4.7K
L1 2.7
R3 470
C6 2200P
CF1 SAF38.9MZW70Z
C5 2200P
1.0V
7.3V
Q1 2SC2735J
0.3V
R8 4.7K
L53 0.47
C51 27P
R6 820
R7 18
R1 22K
R50 6.8K
EO ONLY
R52 120
L52 6F16223A1
L51 6F16222A1
R51 2.2K
VR51 10K
RF AGC (V)
VR52 10K
RF AGC (U)
Q51 RTIN141C
Q52 RTIN141C
C3 0.01
C2 0.01
C1 0.22/50
L3 6F16437A1
C101 82P
R12 5.6K
C10 0.01
C11 1800P
L4 6F16435A1
C102 68P
C12 18P
R22 470
R16 10K
C103 33P
L5 6F16436A1
C13 0.01
C14 22P
CF2 SFE5.5MBF
C15 22P
L6 18
R24 1.5K
C16 3.3/50
R17 1.5K
R18 560
R19 390
L7 18
L8 33
R20 10K
CF3 TPS5.5MW
C17 12P
R21 560
4.5V
5.2V
Q2 2SA1235
CN1
9 AGC CTL V
8 AGC CTL U
7 AUDIO OUT
6 VCC (+9V)
5 IF IN
4 GND
3 VIDEO OUT
2 RF AGC OUT
1 AFT OUT

VIF UNIT 6C02413C1

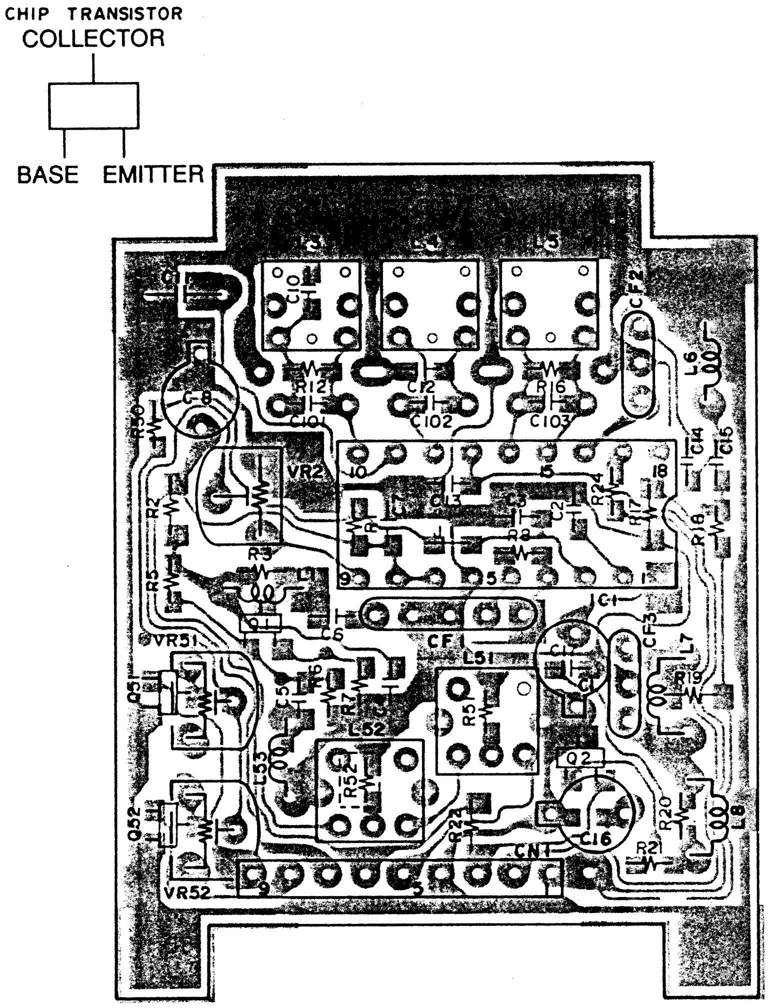
▬ B (POWER SUPPLY) LINE

VS-G40EO

INDICATED VOLTAGES WERE MEASURED
DURING E-E (STOP) MODE.
(WHEN A STATION IS TUNED)

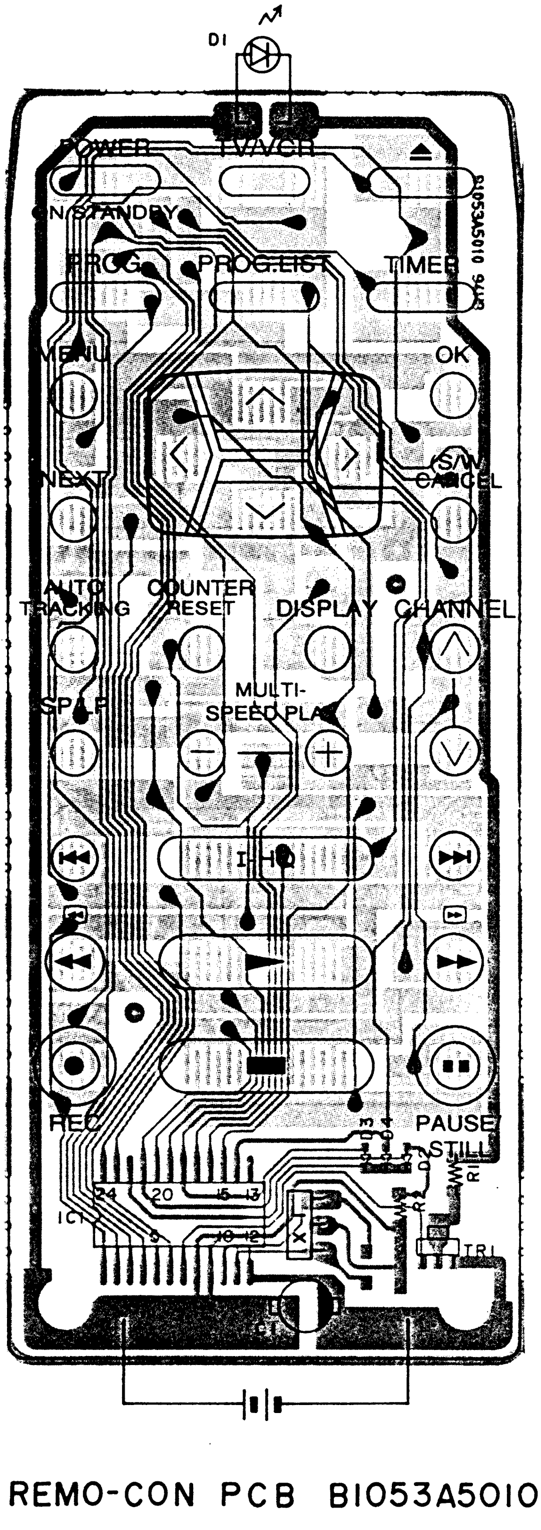
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN μF
ALL INDUCTORS IN μH (K)

VIF UNIT
SCHEMATIC DIAGRAM
NO.19-15 V116414M A2

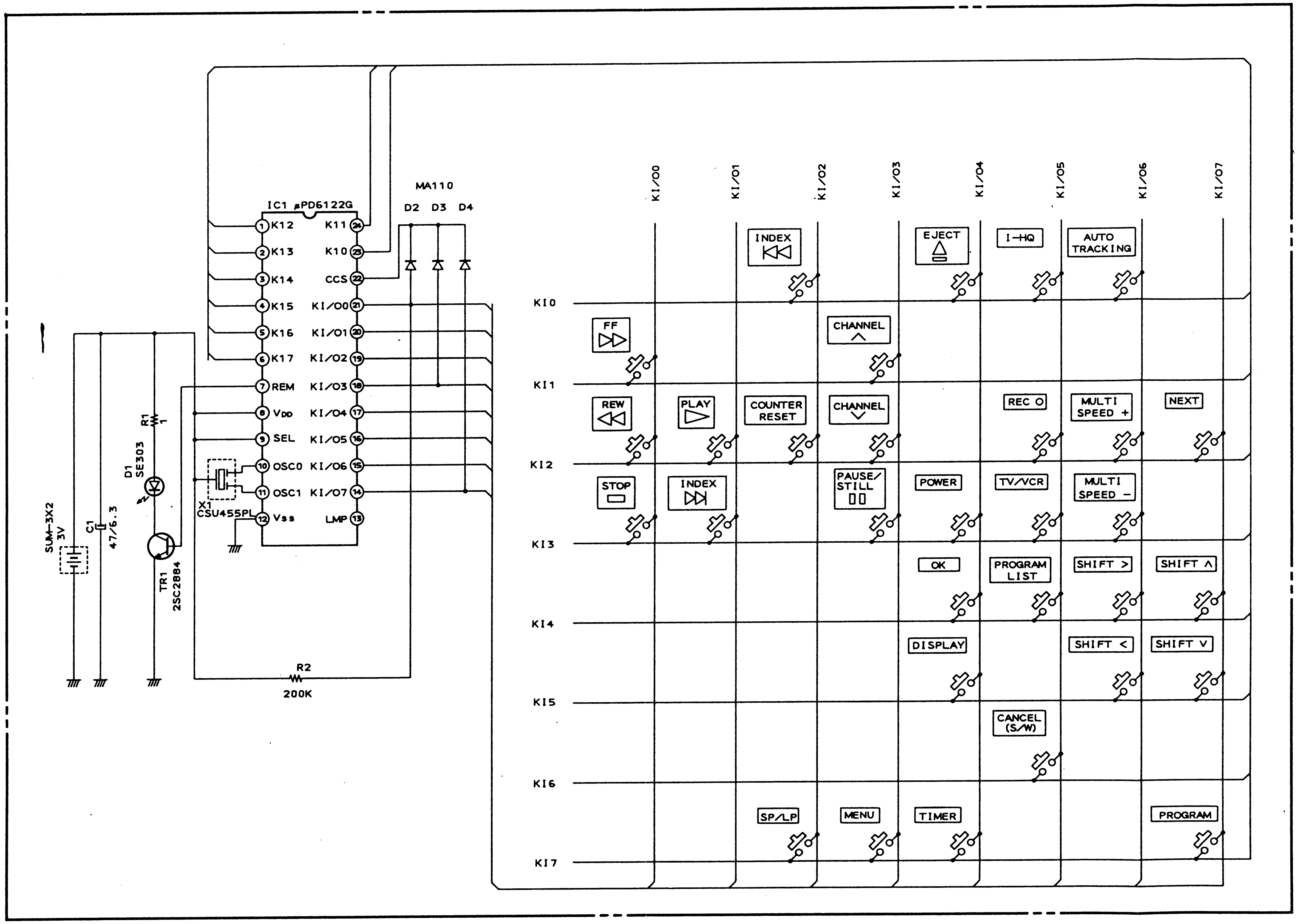

CHIP TRANSISTOR
COLLECTOR
BASE
EMITTER
L3
L4
L5
C10
CF2
L6
R12
C12
R16
C8
C101
C102
C103
R50
C14
C15
VR2
10
15
18
C13
C3
C2
R24
R17
R18
R2
R1
R8
R3
L1
R5
9
5
1
IC1
C6
CF3
L7
VR51
CF1
L51
C1
R19
Q51
C51
R6
R7
R5
C11
L53
L52
R52
Q2
R20
Q52
R22
C16
L8
CN1
R21
VR52
9
5

VIF UNIT 6C02413C1

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER. REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT PARTS INFORMATION.


D1
POWER
TV/VCR
B1053A5010 94/3
ON/STANDBY
PROG.
PROG.LIST
TIMER
MENU
OK
NEXT
S/W CANCEL
AUTO TRACKING
COUNTER RESET
DISPLAY
CHANNEL
SP/LP
MULTI-SPEED PLAY
I-HQ
REC
PAUSE STILL
D3
D4
R1
R2
IC1
24
20
15
13
5
10
12
X1
TR1
C1

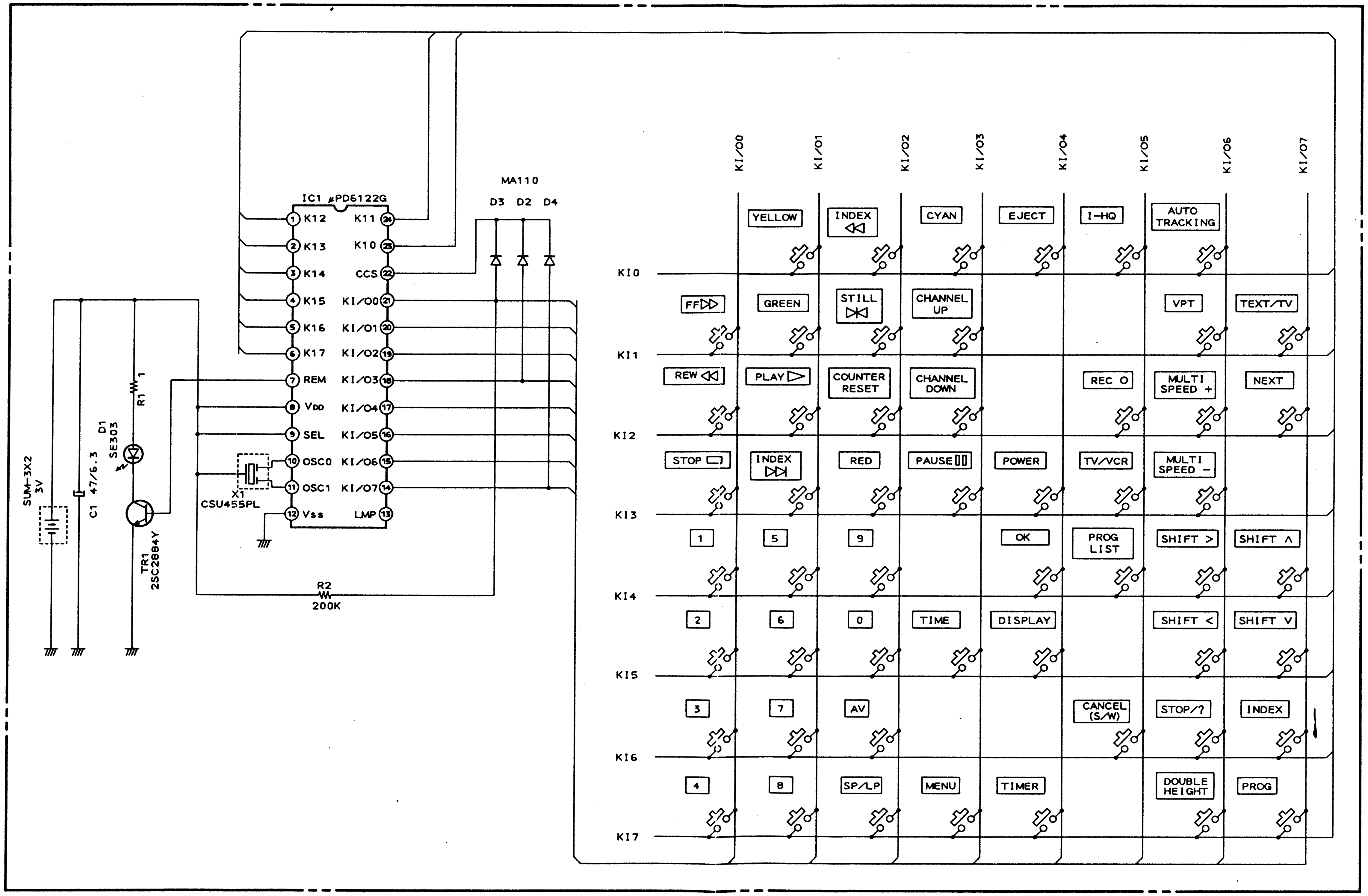
REMO-CON PCB B1053A5010


IC1 μPD6122G
K12
K13
K14
K15
K16
K17
REM
VDD
SEL
OSC0
OSC1
Vss
K11
K10
CCS
KI/O0
KI/O1
KI/O2
KI/O3
KI/O4
KI/O5
KI/O6
KI/O7
LMP
MA110
D2 D3 D4
R1 1
D1 SE303
SUM-3X2 3V
C1 47/6.3
TR1 2SC2884
X1 CSU455PL
R2 200K
KI0
KI1
KI2
KI3
KI4
KI5
KI6
KI7
INDEX
EJECT
I-HQ
AUTO TRACKING
FF
CHANNEL ∧
REW
PLAY
COUNTER RESET
CHANNEL ∨
REC O
MULTI SPEED +
NEXT
STOP
INDEX
PAUSE/STILL
POWER
TV/VCR
MULTI SPEED −
OK
PROGRAM LIST
SHIFT >
SHIFT ∧
DISPLAY
SHIFT <
SHIFT V
CANCEL (S/W)
SP/LP
MENU
TIMER
PROGRAM

REMO-CON PCB B1053A5010

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/8W (J)
ALL CAPACITORS IN μF

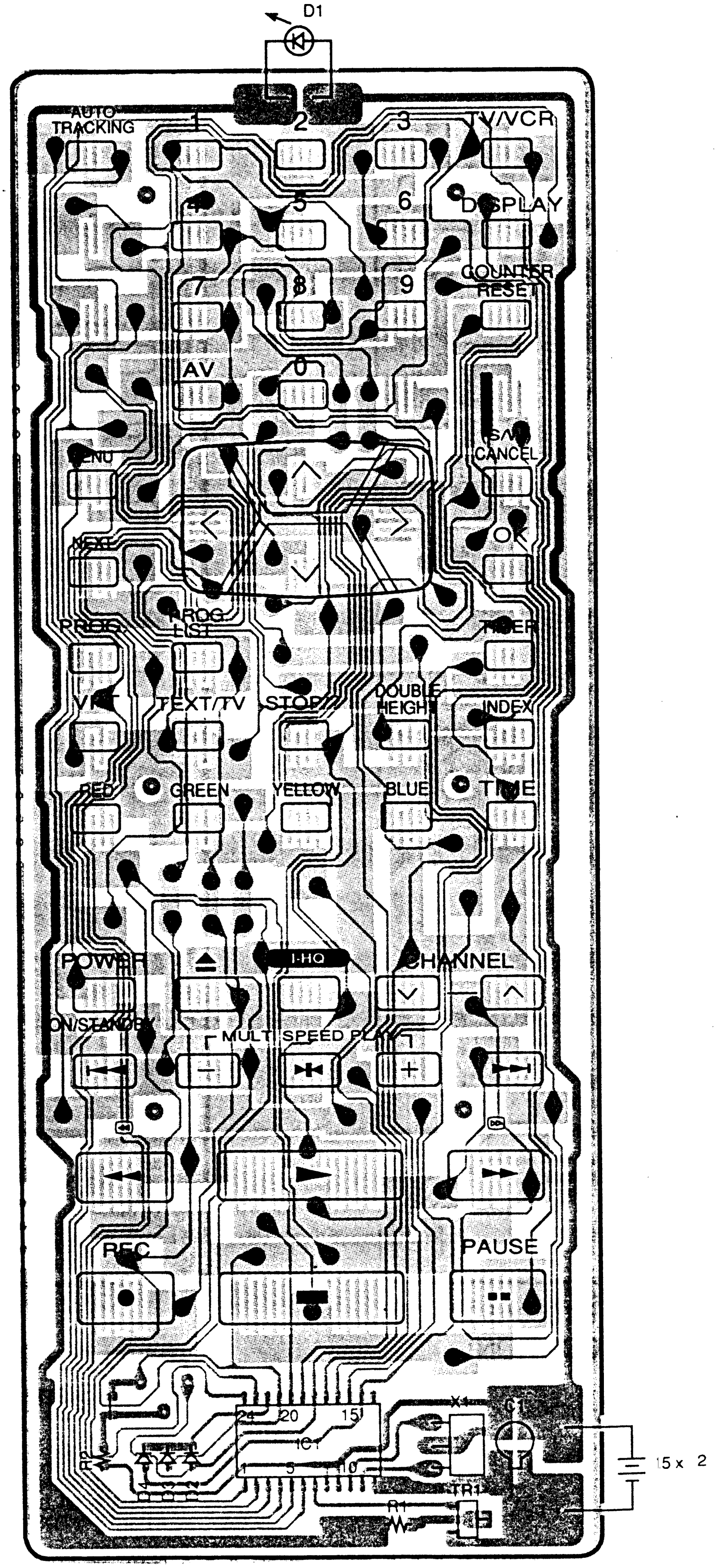
RC-W400E
REMOTE CONTROL UNIT
SCHEMATIC DIAGRAM
NO.19-16 B105301M A2


IC1 μPD6122G
K12
K13
K14
K15
K16
K17
REM
VDD
SEL
OSC0
OSC1
Vss
K11
K10
CCS
KI/O0
KI/O1
KI/O2
KI/O3
KI/O4
KI/O5
KI/O6
KI/O7
LMP
MA110
D3 D2 D4
SUM-3X2 3V
C1 47/6.3
D1 SE303
R1 1
TR1 2SC2884Y
X1 CSU455PL
R2 200K
KI0
KI1
KI2
KI3
KI4
KI5
KI6
KI7
YELLOW
INDEX ◁◁
CYAN
EJECT
I-HQ
AUTO TRACKING
FF▷▷
GREEN
STILL ▷◁
CHANNEL UP
VPT
TEXT/TV
REW ◁◁
PLAY ▷
COUNTER RESET
CHANNEL DOWN
REC O
MULTI SPEED +
NEXT
STOP □
INDEX ▷▷
RED
PAUSE ▯▯
POWER
TV/VCR
MULTI SPEED −
1
5
9
OK
PROG LIST
SHIFT >
SHIFT ∧
2
6
0
TIME
DISPLAY
SHIFT <
SHIFT ∨
3
7
AV
CANCEL (S/W)
STOP/?
INDEX
4
8
SP/LP
MENU
TIMER
DOUBLE HEIGHT
PROG

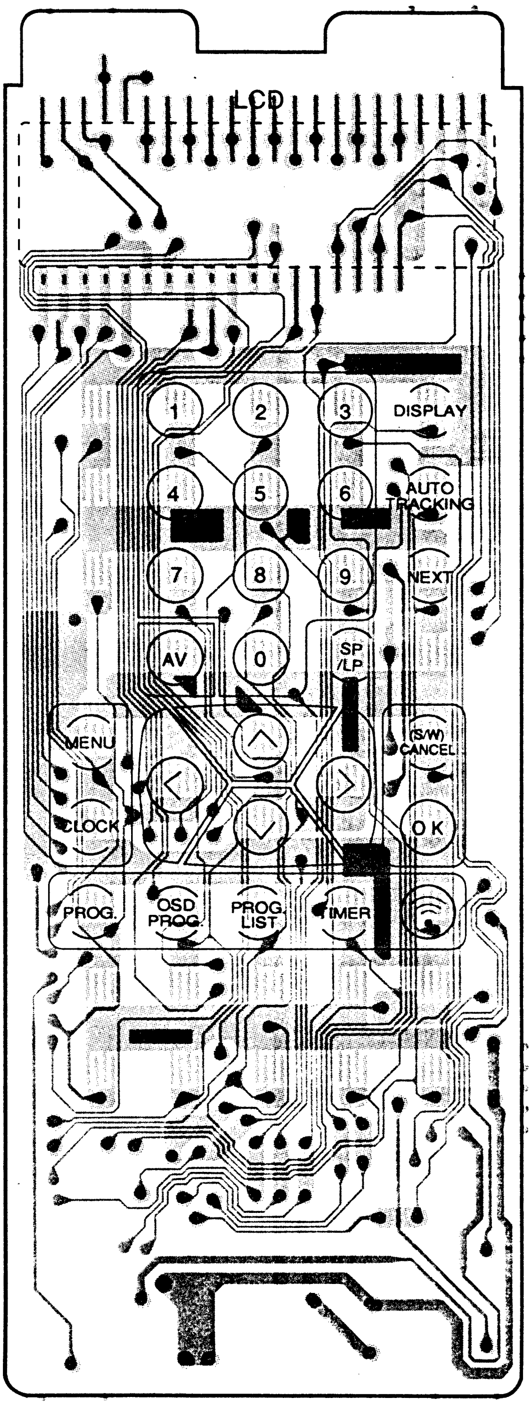
REMO-CON PCB B1051A5010

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/8W(J)

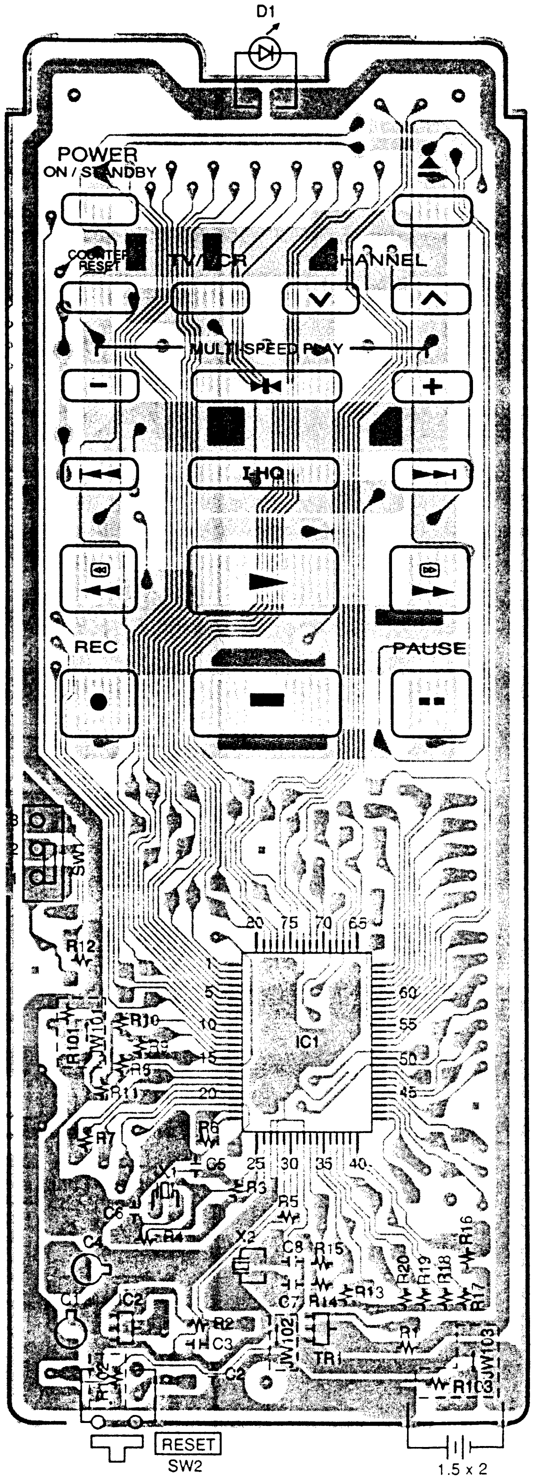
RC-W401G
REMOTE CONTROL UNIT
SCHEMATIC DIAGRAM
NO.19-17 B105102M A2


D1
AUTO TRACKING
1
2
3
TV/VCR
4
5
6
DISPLAY
7
8
9
COUNTER RESET
AV
0
MENU
S/M CANCEL
NEXT
OK
PROG.
PROG. LIST
TIMER
VPT
TEXT/TV
STOP
DOUBLE HEIGHT
INDEX
RED
GREEN
YELLOW
BLUE
TIME
POWER
I-HQ
CHANNEL
ON/STANDBY
MULTI SPEED PLAY
REC
PAUSE
24
20
15
IC1
1
5
10
X1
C1
TR1
R1
1.5 x 2

REMO-CON PCB B1051A5010

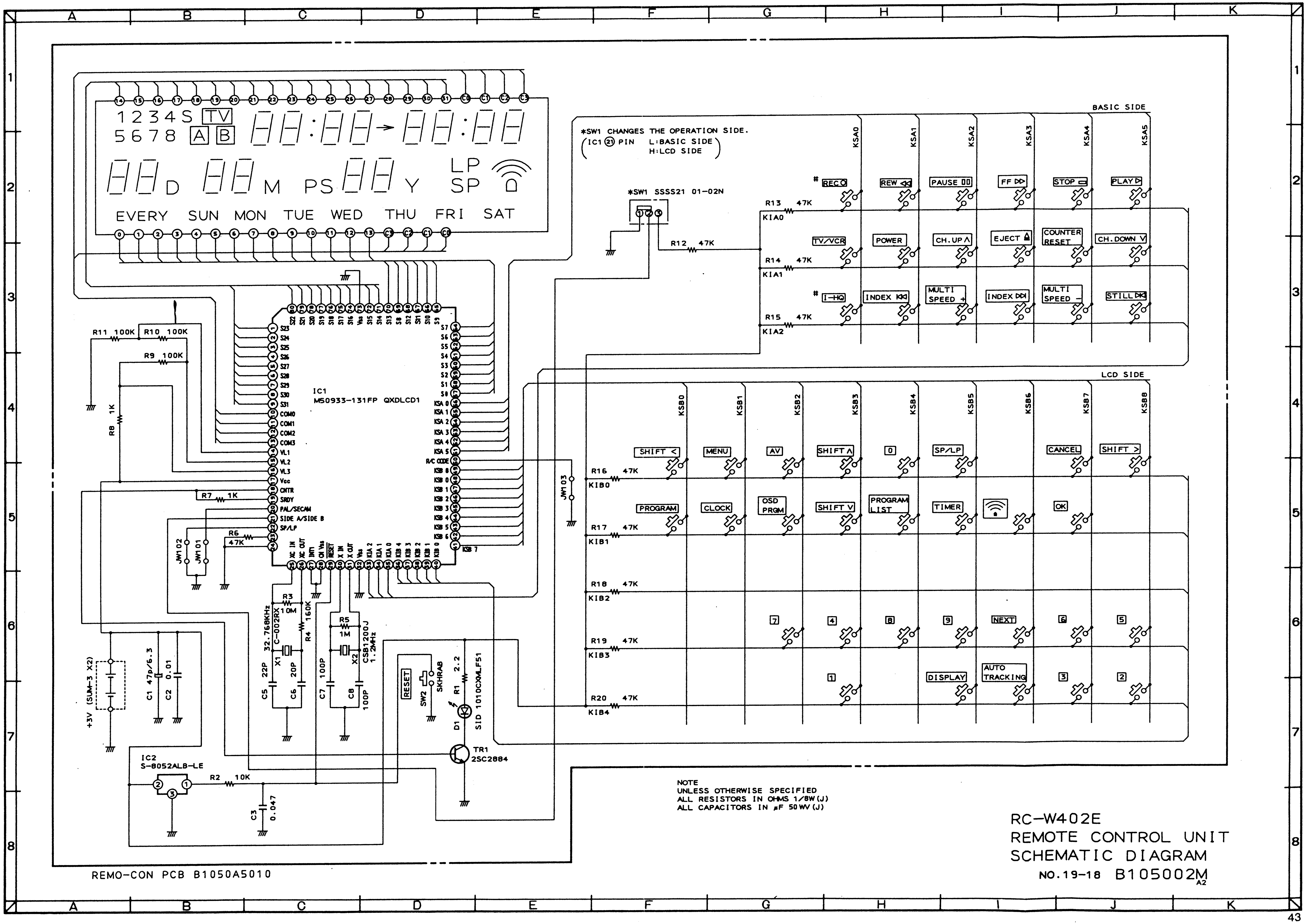

LCD
1
2
3
DISPLAY
4
5
6
AUTO TRACKING
7
8
9
NEXT
AV
0
SP /LP
MENU
(S/W) CANCEL
CLOCK
OK
PROG.
OSD PROG.
PROG. LIST
TIMER

REMO-CON PCB B1050A5010 (J1)
(SWITCH LOCATION)


D1
POWER
ON / STANDBY
COUNTER RESET
TV/VCR
CHANNEL
MULTI SPEED PLAY
I-HQ
REC
PAUSE
SW1
R12
R10
R101
JW101
R9
R11
R7
R6
C5
R3
R5
C6
R4
X1
X2
C4
C8
R15
C7
R14
R13
C1
C2
R2
C3
JW102
TR1
R1
R20
R19
R18
R17
R16
JW103
R103
IC1
RESET
SW2
1.5 x 2
20
75
70
65
1
5
10
15
20
25
30
35
40
60
55
50
45

REMO-CON PCB B1050A5010 (J1)
(PARTS and SWITCH LOCATION)

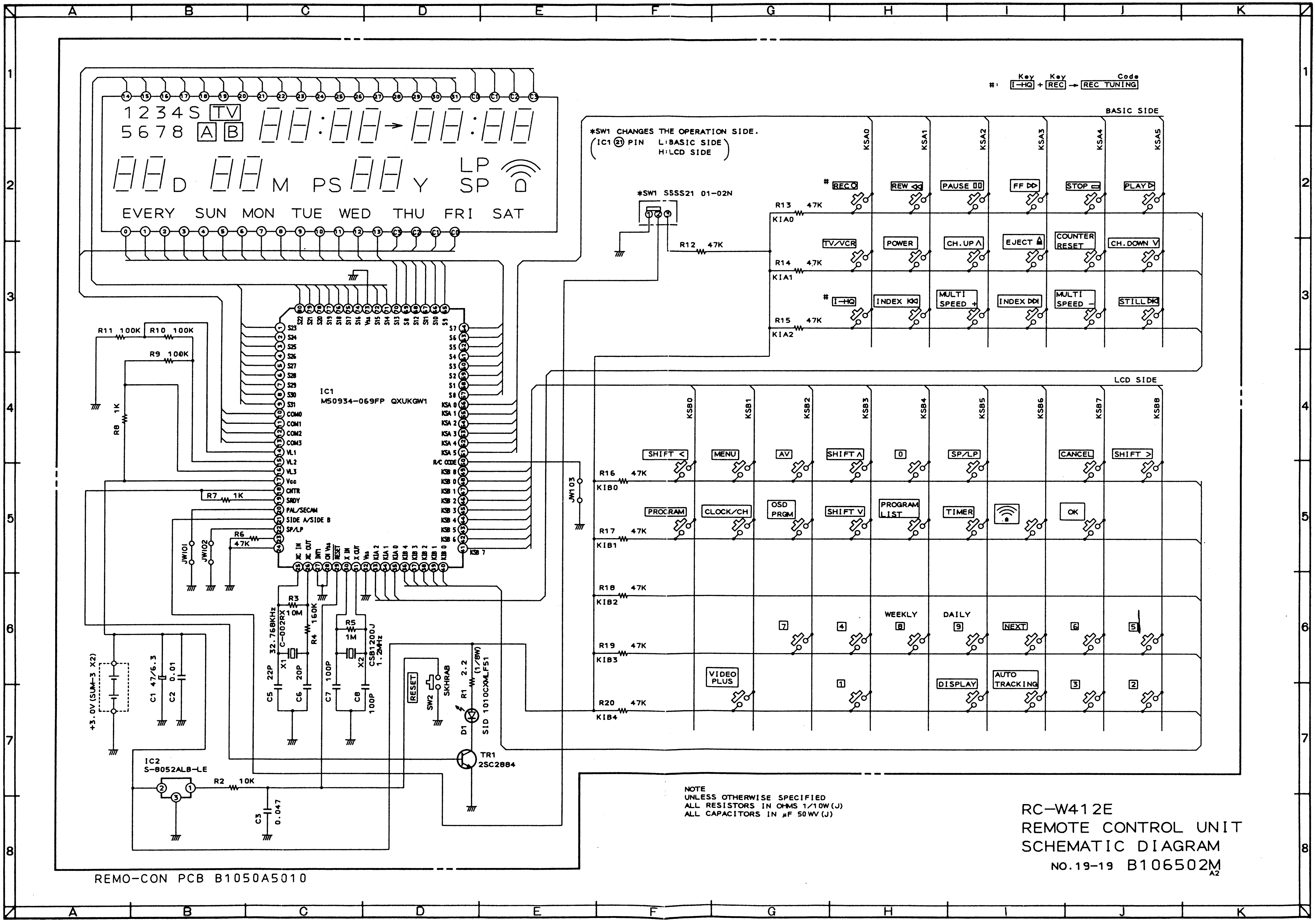
NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER.
REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT PARTS INFORMATION.


A B C D E F G H I J K
1 2 3 4 5 6 7 8
1234S TV
5678 A B
D M PS Y LP SP
EVERY SUN MON TUE WED THU FRI SAT
C0 C1 C2 C3
*SW1 CHANGES THE OPERATION SIDE.
(IC1 ㉑ PIN L:BASIC SIDE H:LCD SIDE)
*SW1 SSSS21 01-02N
BASIC SIDE
KSA0 KSA1 KSA2 KSA3 KSA4 KSA5
# RECO
REW ◁◁
PAUSE ▯▯
FF ▷▷
STOP
PLAY ▷
TV/VCR
POWER
CH.UP ∧
EJECT
COUNTER RESET
CH.DOWN ∨
# I-HQ
INDEX ◁◁
MULTI SPEED +
INDEX ▷▷
MULTI SPEED −
STILL
R13 47K KIA0
R12 47K
R14 47K KIA1
R15 47K KIA2
LCD SIDE
KSB0 KSB1 KSB2 KSB3 KSB4 KSB5 KSB6 KSB7 KSB8
SHIFT <
MENU
AV
SHIFT ∧
0
SP/LP
CANCEL
SHIFT >
PROGRAM
CLOCK
OSD PRGM
SHIFT ∨
PROGRAM LIST
TIMER
OK
7 4 8 9 NEXT 6 5
1 DISPLAY AUTO TRACKING 3 2
R16 47K KIB0
R17 47K KIB1
R18 47K KIB2
R19 47K KIB3
R20 47K KIB4
JW103
IC1
M50933-131FP QXDLCD1
S23 S24 S25 S26 S27 S28 S29 S30 S31 COM0 COM1 COM2 COM3 VL1 VL2 VL3 Vcc CNTR SRDY PAL/SECAM SIDE A/SIDE B SP/LP
S7 S6 S5 S4 S3 S2 S1 S0 KSA 0 KSA 1 KSA 2 KSA 3 KSA 4 KSA 5 R/C CODE KSB 8 KSB 0 KSB 1 KSB 2 KSB 3 KSB 4 KSB 5 KSB 6 KSB 7
S22 S21 S20 S19 S18 S17 S16 Vss S15 S14 S13 S8 S12 S11 S10 S9
XC IN XC OUT INT1 CN Vss RESET X IN X OUT Vss KIA 2 KIA 1 KIA 0 KIB 4 KIB 3 KIB 2 KIB 1 KIB 0
R11 100K R10 100K
R9 100K
R8 1K
R7 1K
R6 47K
JW102 JW101
R3 10M
R4 160K
X1 C-002RX 32.768KHz
C5 22P C6 20P
R5 1M
X2 CSB1200J 1.2MHz
C7 100P C8 100P
RESET SW2 SKHRAB
R1 2.2
D1 SID 1010CXMLF51
TR1 2SC2884
+3V (SUM-3 X2)
C1 47μ/6.3 C2 0.01
IC2 S-8052ALB-LE
R2 10K
C3 0.047

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/8W (J)
ALL CAPACITORS IN μF 50WV (J)

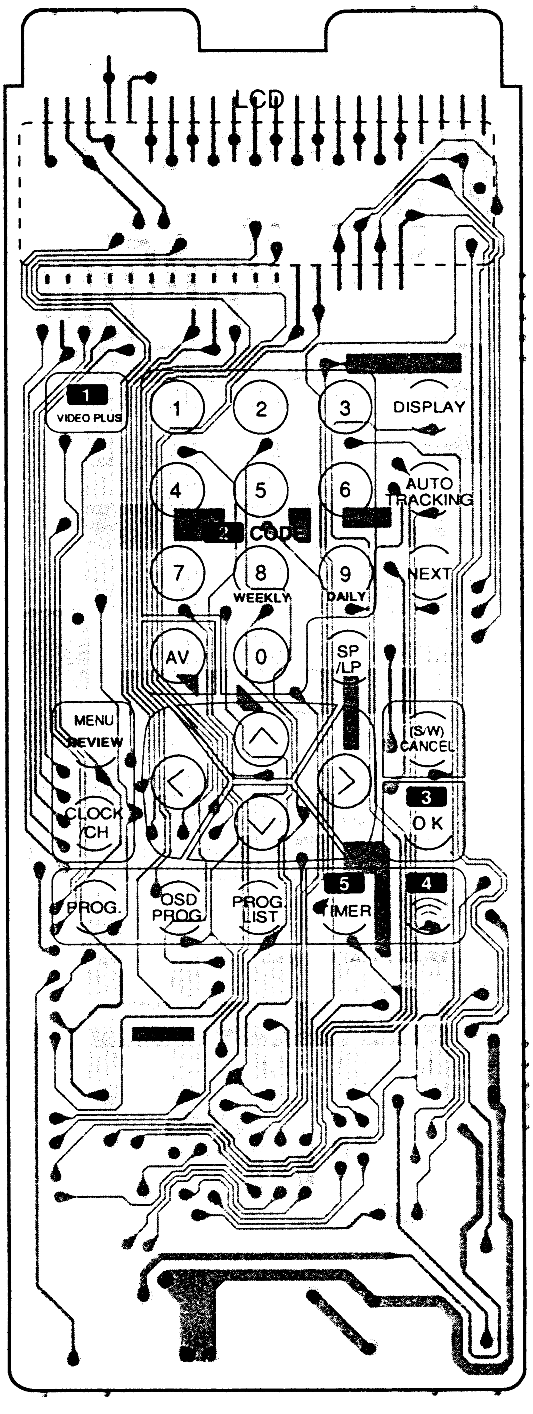
RC-W402E
REMOTE CONTROL UNIT
SCHEMATIC DIAGRAM
NO.19-18 B105002M A2

REMO-CON PCB B1050A5010

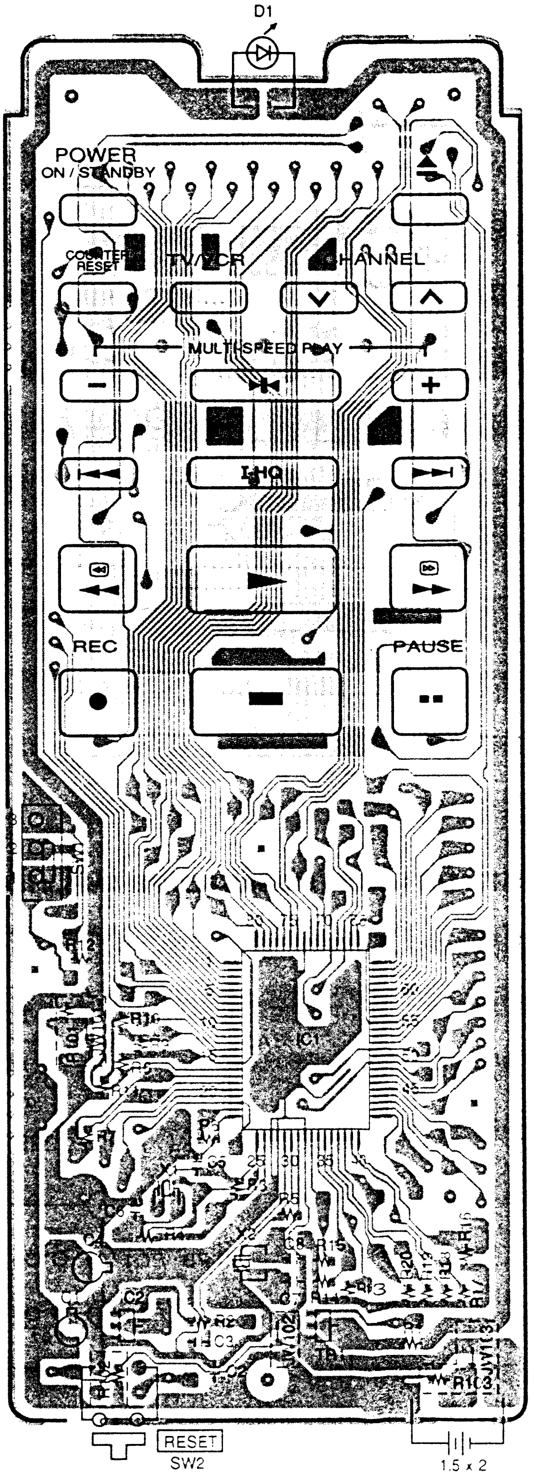

A
B
C
D
E
F
G
H
I
J
K
1
2
3
4
5
6
7
8
1234S TV
5678 A B
D M PS Y LP SP
EVERY SUN MON TUE WED THU FRI SAT
IC1
M50934-069FP QXUKGW1
R11 100K
R10 100K
R9 100K
R8 1K
R7 1K
R6 47K
JW101
JW102
JW103
R3 10M
R4 160K
X1 C-002RX 32.768KHz
C5 22P
C6 20P
C7 100P
R5 1M
X2 CSB1200J 1.2MHz
C8 100P
RESET
SW2 SKHRAB
R1 2.2 (1/8W)
D1 SID 1010CXMLF51
TR1 2SC2884
+3.0V (SUM-3 X2)
C1 47/6.3
C2 0.01
IC2 S-8052ALB-LE
R2 10K
C3 0.047
*SW1 CHANGES THE OPERATION SIDE.
(IC1 ㉑ PIN L:BASIC SIDE H:LCD SIDE)
*SW1 SSSS21 01-02N
R12 47K
#: Key I-HQ + Key REC → Code REC TUNING
BASIC SIDE
KSA0
KSA1
KSA2
KSA3
KSA4
KSA5
R13 47K KIA0
R14 47K KIA1
R15 47K KIA2
# REC
REW
PAUSE
FF
STOP
PLAY
TV/VCR
POWER
CH.UP ∧
EJECT
COUNTER RESET
CH.DOWN V
# I-HQ
INDEX
MULTI SPEED +
INDEX
MULTI SPEED -
STILL
LCD SIDE
KSB0
KSB1
KSB2
KSB3
KSB4
KSB5
KSB6
KSB7
KSB8
R16 47K KIB0
R17 47K KIB1
R18 47K KIB2
R19 47K KIB3
R20 47K KIB4
SHIFT <
MENU
AV
SHIFT ∧
0
SP/LP
CANCEL
SHIFT >
PROGRAM
CLOCK/CH
OSD PRGM
SHIFT V
PROGRAM LIST
TIMER
OK
WEEKLY
DAILY
7
4
8
9
NEXT
6
5
VIDEO PLUS
1
DISPLAY
AUTO TRACKING
3
2
REMO-CON PCB B1050A5010

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/10W (J)
ALL CAPACITORS IN μF 50WV (J)

RC-W412E
REMOTE CONTROL UNIT
SCHEMATIC DIAGRAM
NO.19-19 B106502M A2


LCD
1
VIDEO PLUS
1
2
3
DISPLAY
4
5
6
AUTO TRACKING
2
CODE
7
8
9
NEXT
WEEKLY
DAILY
AV
0
SP /LP
MENU REVIEW
(S/W) CANCEL
CLOCK /CH
3
O K
PROG.
OSD PROG
PROG. LIST
5
TIMER
4

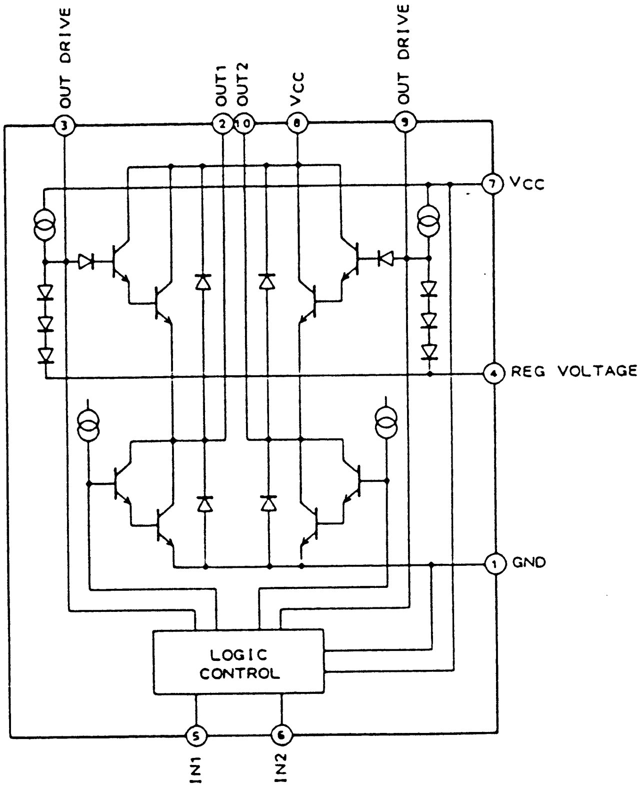
REMO-CON PCB B1050A5010 (J1)
(SWITCH LOCATION)


D1
POWER
ON / STANDBY
COUNTER RESET
TV/VCR
CHANNEL
MULTI-SPEED PLAY
-
+
I-HQ
REC
PAUSE
IC1
R16
R12
C5
C8
C2
C3
R2
R13
R10
RESET
SW2
1.5 x 2

REMO-CON PCB B1050A5010 (J1)
(PARTS and SWITCH LOCATION)

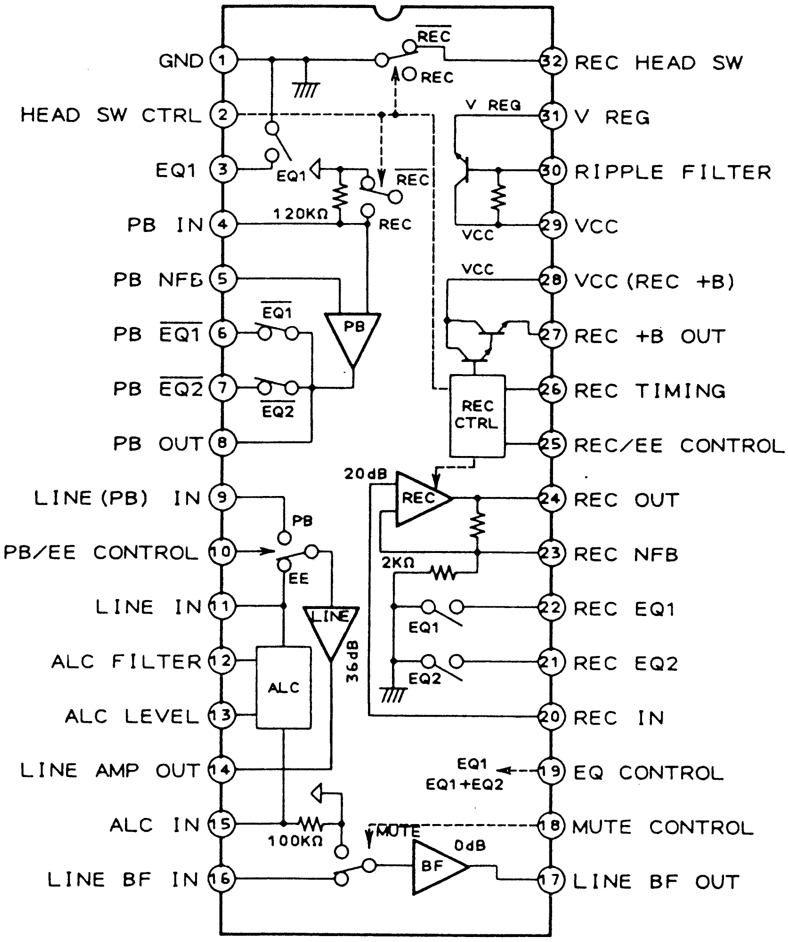
NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER. REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT PARTS INFORMATION.

BA6229 (BI-DIRECTIONAL MOTOR DRIVE)


OUT DRIVE
OUT1
OUT2
VCC
OUT DRIVE
3
2
10
8
9
7 VCC
4 REG VOLTAGE
1 GND
LOGIC CONTROL
5
6
IN1
IN2

INPUT		OUTPUT		MODE
⑤	⑥	②	⑩	
H	H	L	L	BRAKE
L	H	L	H	CASSETTE & TAPE LOADING
H	L	H	L	CASSETTE & TAPE UNLOADING
L	L	OPEN	OPEN	STOP

BA7765AS (AUDIO SIGNAL REC/PB AMPLIFIER)


GND 1
HEAD SW CTRL 2
EQ1 3
PB IN 4
PB NFB 5
PB $\overline{EQ1}$ 6
PB $\overline{EQ2}$ 7
PB OUT 8
LINE (PB) IN 9
PB/EE CONTROL 10
LINE IN 11
ALC FILTER 12
ALC LEVEL 13
LINE AMP OUT 14
ALC IN 15
LINE BF IN 16
32 REC HEAD SW
31 V REG
30 RIPPLE FILTER
29 VCC
28 VCC (REC +B)
27 REC +B OUT
26 REC TIMING
25 REC/EE CONTROL
24 REC OUT
23 REC NFB
22 REC EQ1
21 REC EQ2
20 REC IN
19 EQ CONTROL
18 MUTE CONTROL
17 LINE BF OUT
$\overline{REC}$
REC
V REG
EQ1
$\overline{REC}$
120KΩ
REC
VCC
VCC
$\overline{EQ1}$
PB
$\overline{EQ2}$
REC CTRL
20dB
REC
PB
EE
2KΩ
LINE
36dB
ALC
EQ1
EQ2
EQ1
EQ1+EQ2
100KΩ
MUTE
0dB
BF

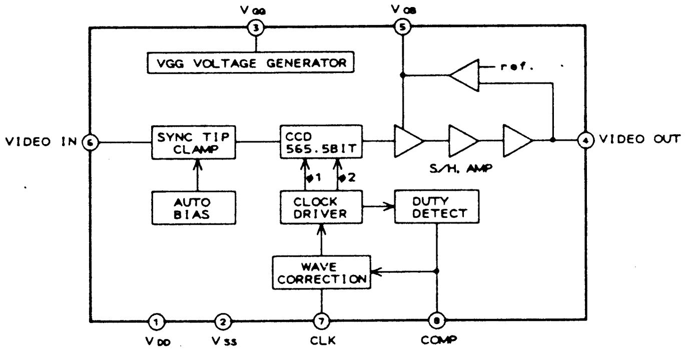
CF72307 (TELETEXT DECODER)

PIN No.	PORT NAME	I/O	FUNCTION
1	FIELD	O	Programmable output polarity of a 25 Hz output signal synchronized either with CSYNC or SLVHVSYNC input field sync pulses to produce a non-interlaced display.
2	DCSYNC	O	Digital composite sync output.
3	CSYNCIN	I	Active low composite sync.
4	TACW	I	Teletext aquisition window.
5	TUM	I	Test pin. (Must be grounded in normal application.)
6	OSCOUT	O	13.875 MHz crystal oscillator output.
7	OSCIN	I	13.875 MHz crystal oscillator input. (OSCIN must be grounded if the 13.875 MHz clock of the dataslicer is connected to CLKIN.)
8	DVCC1	I	Power supply for digital logic. (5 V ± 5 %)
9	CLKIN	I	13.875 MHz system clock input for digital logic.
10	DGND2	–	Ground terminal for digital logic.
11	TDATA	I	Teletext data from dataslicer.
12	TCLOCK	I	Teletext clock from dataslicer.
13	DGND1	–	Ground terminal for digital logic.
14	AVCC1	I	Power supply for analogue logic. (5 V ± 5 %)
15	BLANK	O	Picture blanking signal (active high).
16	BLUE	O	Blue output (active high).
17	AGND1	–	Ground terminal for analogue logic.
18	GREEN	O	Green output (active high).
19	AGND2	–	Ground terminal for analogue logic.
20	RED	O	Red output (active high).
21	AGND3	–	Ground terminal for analogue logic.
22	RGBSET	I/O	A current, determind by a resistor defines the output high level on the RGB pins.
23	REF	I/O	Reference voltage output for the RGB output drivers.
24	AVCC2	I	Power supply for analogue logic. (5 V ± 5 %)
25	VIDEOIN	I	Composite video signal input.
26	ACSYNC	O	Analogue output of sync switch.
27	TEST	I	Test pin. (Must be grounded in normal application.)
28	BIAS	I	Bias definition pin. (BIAS should be grounded if the on chip oscillator is not used.)
29	$\overline{\text{RESET}}$	I	Power on reset signal input (active low).
30	TRC	I	Test pin. (Must be grounded in normal application.)
31	TGST		
32	TGMT		
33	SLVHSYNC	I	Programmable active low or high H-sync input. (In slave sync mode, it locks the horizontal display timing to this signal.)
34	SLVHVSYNC	I	Programmable active low or high V-sync input. (In slave sync mode, it locks the vertical display timing to this signal.)
35	PWRDWN	I	Power down the IC in test mode.(Should be grounded in normal application.)
36	SDA	I/O	I²C-bus serial data.
37	SCL	I/O	I²C-bus serial data clock.
38	C1	I	Test pin. (Must be connected to +5 V in normal application.)
39	CO	I	
50	A0	O	DRAM row and column address.
46	A1		
43	A2		
41	A3		
40	A4		
42	A5		
45	A6		
48	A7		
51	A8		
54	A9		
44	DVCC2	I	Power supply for digital logic. (5 V ± 5 %)
47	DGND3	–	Ground terminal for digital logic.
49	DGND4	–	
52	VDD32	O	Output terminal of the 3.2 V power supply.
53	DVCC3	I	Power supply for digital logic. (5 V ± 5 %)
55	$\overline{\text{G}}$	O	DRAM output (active low).
56	$\overline{\text{RAS0}}$	O	DRAM row address strobe output.
57	$\overline{\text{CAS0}}$	O	DRAM column address strobe output.
58	$\overline{\text{W}}$	O	DRAM write command (active low).
62	D0	I/O	DRAM data.
60	D1		
59	D2		
61	D3		
63	$\overline{\text{RAS1}}$	O	DRAM row address strobe for memory bank zero.
64	$\overline{\text{CAS1}}$	O	DRAM column address strobe for memory bank one.

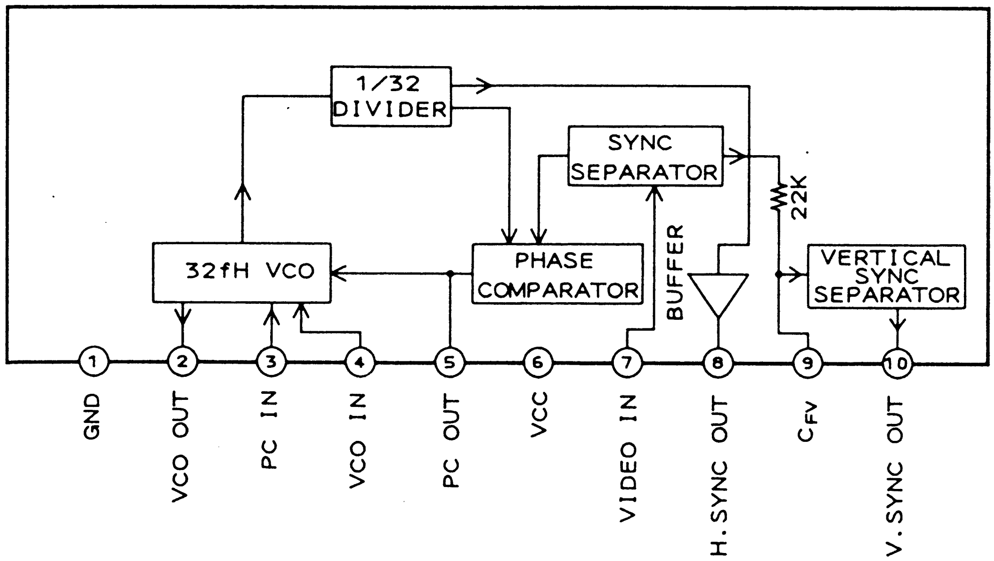
CF72306 (TELETEXT DATA SLICER)

PIN No.	PORT NAME	I/O	FUNCTION
1	TSIG	I	Video sync input 1
2	SSIG	I	Video sync input 2
3	CSIG	I	Video data input
4	AGND1	–	Analogue ground
5	OSC1	I	13.875 MHz oscillator
6	OSC2	I	13.875 MHz oscillator
7	AVCC	–	Analogue Vcc
8	CREF	I	Video data reference input
9	AGND2	–	Analogue ground
10	BIAS	I	Internal reference
11	TSTAPLB	I	Test/Application
12	TCLK	O	Teletext clock
13	TDATA	O	Teletext data
14	DGND2	–	Digital ground
15	OSCOUT	O	Oscillator output
16	DVCC	–	Digital Vcc
17	WIND	I	Timing signal
18	DGND1	–	Digital ground
19	SYNC	O	Separated sync output
20	SCANOUT	O	Test scan output

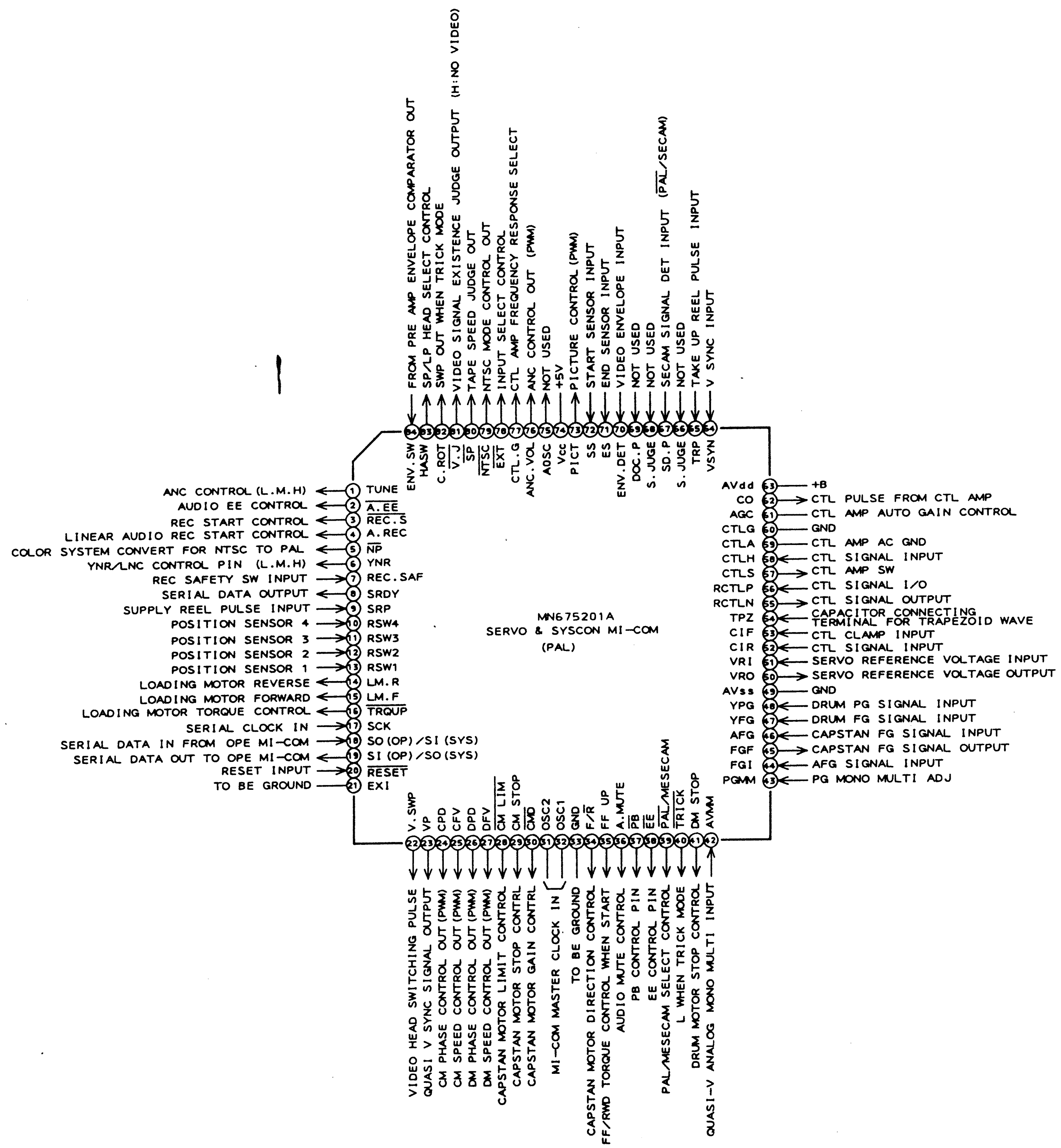
LC8992 (CCD 1H DELAY LINE)


V GG
V GB
3
5
VGG VOLTAGE GENERATOR
ref.
VIDEO IN
6
SYNC TIP CLAMP
CCD 565.5BIT
4
VIDEO OUT
S/H. AMP
ϕ1
ϕ2
AUTO BIAS
CLOCK DRIVER
DUTY DETECT
WAVE CORRECTION
1
2
7
8
V DD
V SS
CLK
COMP

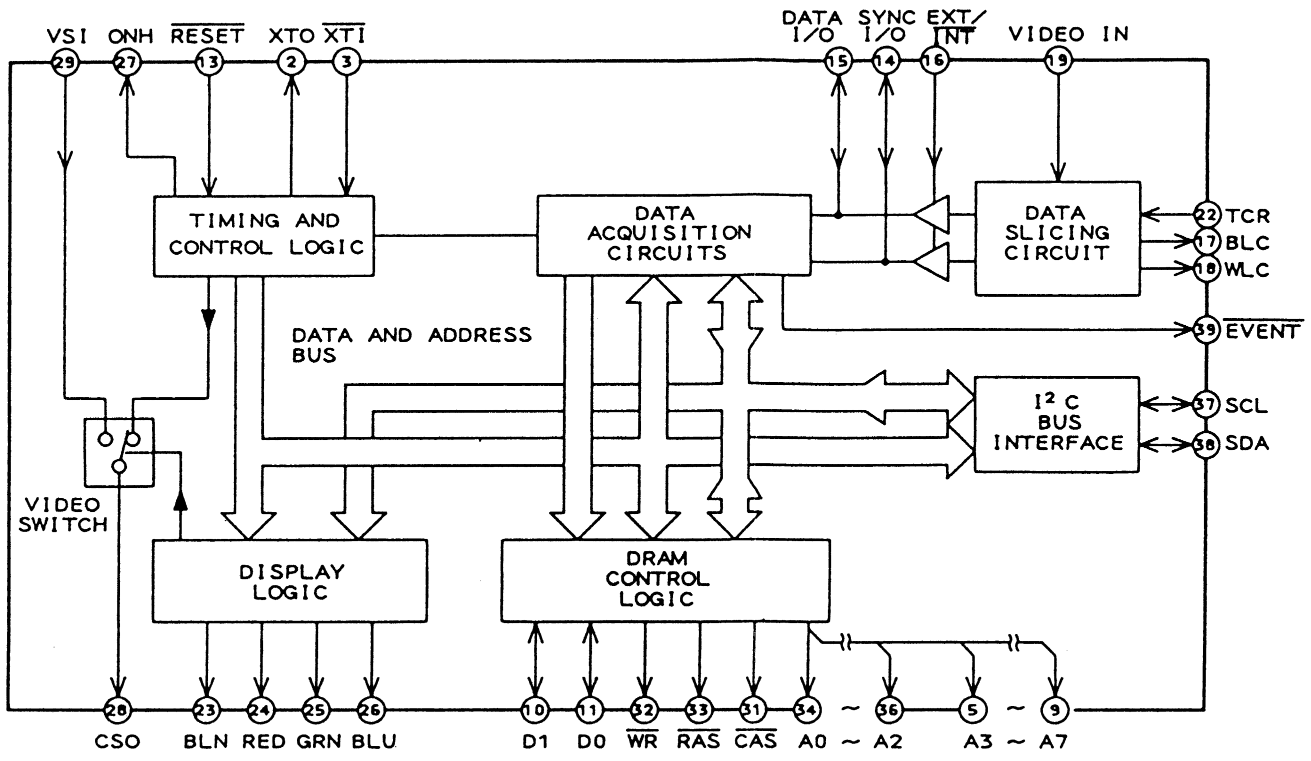
MM1068XS (SYNC SEPARATOR)


1/32 DIVIDER
SYNC SEPARATOR
22K
BUFFER
32fH VCO
PHASE COMPARATOR
VERTICAL SYNC SEPARATOR
1
2
3
4
5
6
7
8
9
10
GND
VCO OUT
PC IN
VCO IN
PC OUT
VCC
VIDEO IN
H. SYNC OUT
CFV
V. SYNC OUT

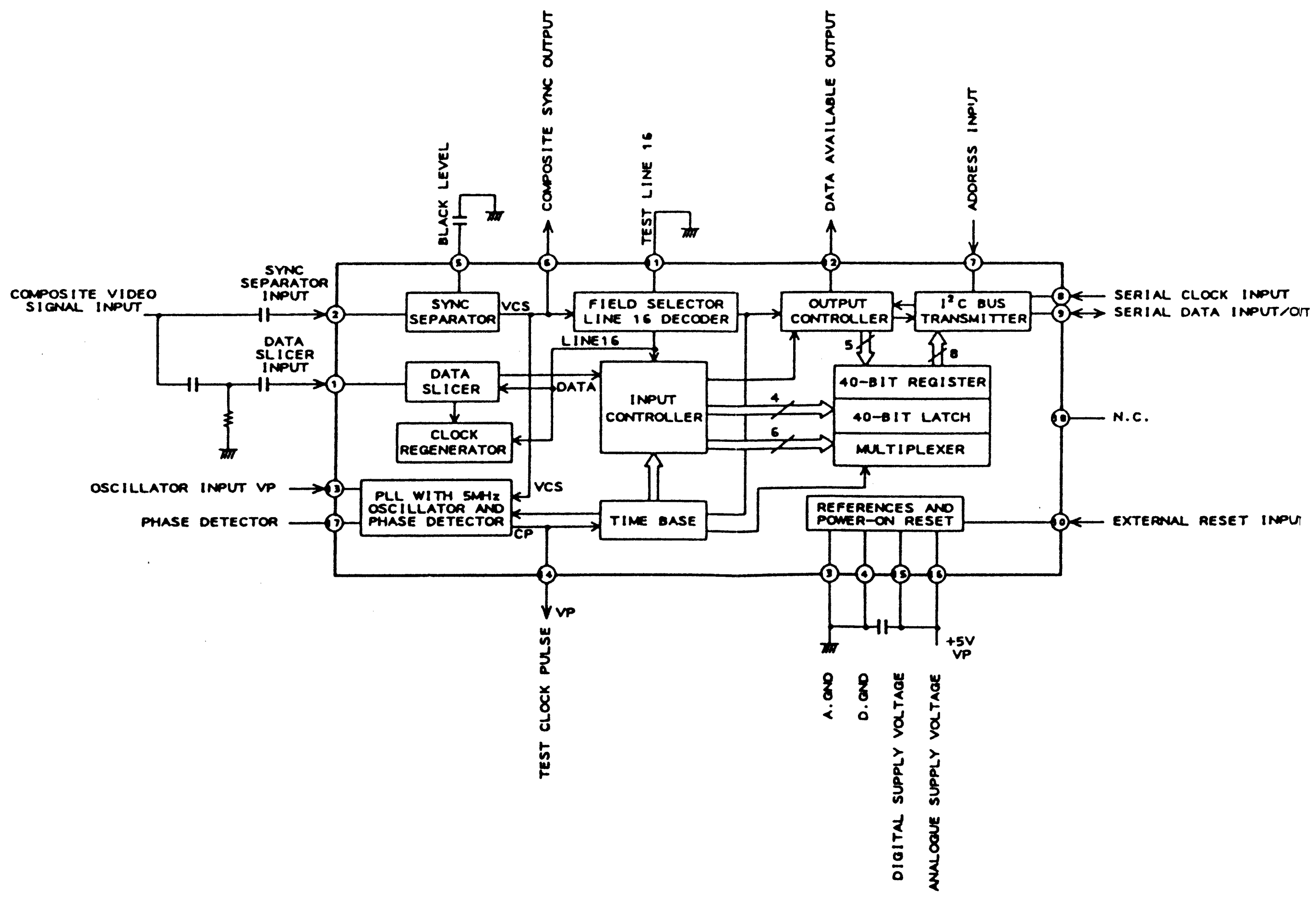
MN675201A (SERVO/SYSCON MI-COM)


MN675201A
SERVO & SYSCON MI-COM
(PAL)
ANC CONTROL (L.M.H) ← ① TUNE
AUDIO EE CONTROL ← ② A.EE
REC START CONTROL ← ③ REC.S
LINEAR AUDIO REC START CONTROL ← ④ A.REC
COLOR SYSTEM CONVERT FOR NTSC TO PAL ← ⑤ NP
YNR/LNC CONTROL PIN (L.M.H) ← ⑥ YNR
REC SAFETY SW INPUT → ⑦ REC.SAF
SERIAL DATA OUTPUT ← ⑧ SRDY
SUPPLY REEL PULSE INPUT → ⑨ SRP
POSITION SENSOR 4 → ⑩ RSW4
POSITION SENSOR 3 → ⑪ RSW3
POSITION SENSOR 2 → ⑫ RSW2
POSITION SENSOR 1 → ⑬ RSW1
LOADING MOTOR REVERSE ← ⑭ LM.R
LOADING MOTOR FORWARD ← ⑮ LM.F
LOADING MOTOR TORQUE CONTROL ← ⑯ TRQUP
SERIAL CLOCK IN → ⑰ SCK
SERIAL DATA IN FROM OPE MI-COM → ⑱ SO (OP) / SI (SYS)
SERIAL DATA OUT TO OPE MI-COM ← ⑲ SI (OP) / SO (SYS)
RESET INPUT → ⑳ RESET
TO BE GROUND — ㉑ EXI
㉒ V.SWP → VIDEO HEAD SWITCHING PULSE
㉓ VP → QUASI V SYNC SIGNAL OUTPUT
㉔ CPD → CM PHASE CONTROL OUT (PWM)
㉕ CFV → CM SPEED CONTROL OUT (PWM)
㉖ DPD → DM PHASE CONTROL OUT (PWM)
㉗ DFV → DM SPEED CONTROL OUT (PWM)
㉘ CM LIM → CAPSTAN MOTOR LIMIT CONTROL
㉙ CM STOP → CAPSTAN MOTOR STOP CONTRL
㉚ CMD → CAPSTAN MOTOR GAIN CONTRL
㉛ OSC2
㉜ OSC1
MI-COM MASTER CLOCK IN
㉝ GND — TO BE GROUND
㉞ F/R → CAPSTAN MOTOR DIRECTION CONTROL
㉟ FF UP → FF/RWD TORQUE CONTROL WHEN START
(36) A.MUTE → AUDIO MUTE CONTROL
(37) PB → PB CONTROL PIN
(38) EE → EE CONTROL PIN
(39) PAL/MESECAM → PAL/MESECAM SELECT CONTROL
(40) TRICK → L WHEN TRICK MODE
(41) DM STOP → DRUM MOTOR STOP CONTROL
(42) AVMM ← QUASI-V ANALOG MONO MULTI INPUT
PGMM (43) ← PG MONO MULTI ADJ
FGI (44) ← AFG SIGNAL INPUT
FGF (45) → CAPSTAN FG SIGNAL OUTPUT
AFG (46) ← CAPSTAN FG SIGNAL INPUT
YFG (47) ← DRUM FG SIGNAL INPUT
YPG (48) ← DRUM PG SIGNAL INPUT
AVss (49) — GND
VRO (50) → SERVO REFERENCE VOLTAGE OUTPUT
VRI (51) ← SERVO REFERENCE VOLTAGE INPUT
CIR (52) ← CTL SIGNAL INPUT
CIF (53) ← CTL CLAMP INPUT
TPZ (54) ← CAPACITOR CONNECTING TERMINAL FOR TRAPEZOID WAVE
RCTLN (55) → CTL SIGNAL OUTPUT
RCTLP (56) ← CTL SIGNAL I/O
CTLS (57) → CTL AMP SW
CTLH (58) ← CTL SIGNAL INPUT
CTLA (59) — CTL AMP AC GND
CTLG (60) — GND
AGC (61) — CTL AMP AUTO GAIN CONTROL
CO (62) → CTL PULSE FROM CTL AMP
AVdd (63) — +B
(64) VSYN ← V SYNC INPUT
(65) TRP ← TAKE UP REEL PULSE INPUT
(66) S.JUGE ← NOT USED
(67) SD.P ← SECAM SIGNAL DET INPUT (PAL/SECAM)
(68) S.JUGE ← NOT USED
(69) DOC.P ← NOT USED
(70) ENV.DET ← VIDEO ENVELOPE INPUT
(71) ES ← END SENSOR INPUT
(72) SS ← START SENSOR INPUT
(73) PICT → PICTURE CONTROL (PWM)
(74) Vcc — +5V
(75) AOSC → NOT USED
(76) ANC.VOL → ANC CONTROL OUT (PWM)
(77) CTL.G → CTL AMP FREQUENCY RESPONSE SELECT
(78) EXT → INPUT SELECT CONTROL
(79) NTSC → NTSC MODE CONTROL OUT
(80) SP → TAPE SPEED JUDGE OUT
(81) V.J → VIDEO SIGNAL EXISTENCE JUDGE OUTPUT (H:NO VIDEO)
(82) C.ROT → SWP OUT WHEN TRICK MODE
(83) HASW → SP/LP HEAD SELECT CONTROL
(84) ENV.SW ← FROM PRE AMP ENVELOPE COMPARATOR OUT

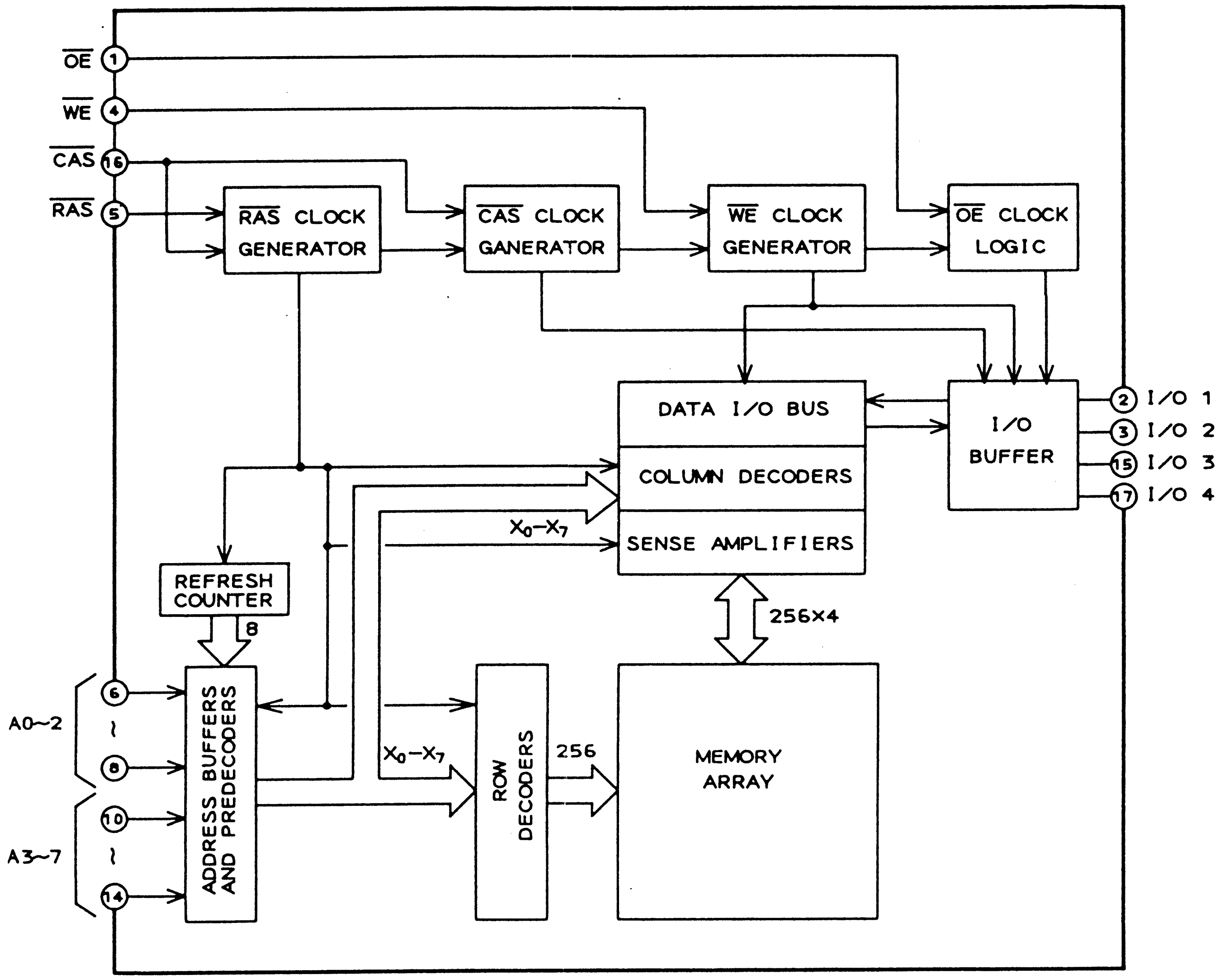
MV1815 (TELETEXT DECODER FOR 625 LINE OPERATION)


VSI
ONH
RESET
XTO
XTI
DATA I/O
SYNC I/O
EXT/INT
VIDEO IN
29
27
13
2
3
15
14
16
19
TIMING AND CONTROL LOGIC
DATA ACQUISITION CIRCUITS
DATA SLICING CIRCUIT
22 TCR
17 BLC
18 WLC
39 EVENT
DATA AND ADDRESS BUS
I² C BUS INTERFACE
37 SCL
38 SDA
VIDEO SWITCH
DISPLAY LOGIC
DRAM CONTROL LOGIC
28
23
24
25
26
10
11
32
33
31
34
36
5
9
CSO
BLN
RED
GRN
BLU
D1
D0
WR
RAS
CAS
A0 ~ A2
A3 ~ A7

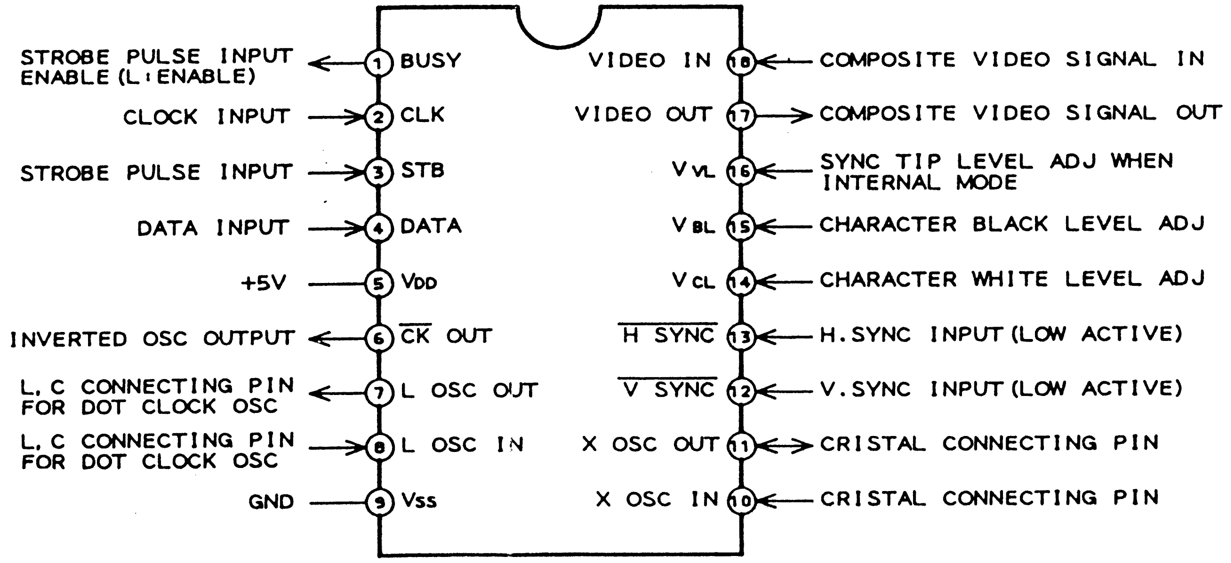
SAA4700 (VPS DATA LINE PROCESSOR)


BLACK LEVEL
COMPOSITE SYNC OUTPUT
TEST LINE 16
DATA AVAILABLE OUTPUT
ADDRESS INPUT
5
6
11
12
7
COMPOSITE VIDEO SIGNAL INPUT
SYNC SEPARATOR INPUT
2
DATA SLICER INPUT
1
SYNC SEPARATOR
VCS
FIELD SELECTOR LINE 16 DECODER
LINE16
OUTPUT CONTROLLER
I² C BUS TRANSMITTER
8
9
SERIAL CLOCK INPUT
SERIAL DATA INPUT/OUT
DATA SLICER
DATA
CLOCK REGENERATOR
INPUT CONTROLLER
5
8
40-BIT REGISTER
40-BIT LATCH
MULTIPLEXER
4
6
18
N.C.
OSCILLATOR INPUT VP
13
PHASE DETECTOR
17
PLL WITH 5MHz OSCILLATOR AND PHASE DETECTOR
VCS
CP
TIME BASE
REFERENCES AND POWER-ON RESET
10
EXTERNAL RESET INPUT
14
VP
3
4
15
16
+5V VP
TEST CLOCK PULSE
A.GND
D.GND
DIGITAL SUPPLY VOLTAGE
ANALOGUE SUPPLY VOLTAGE

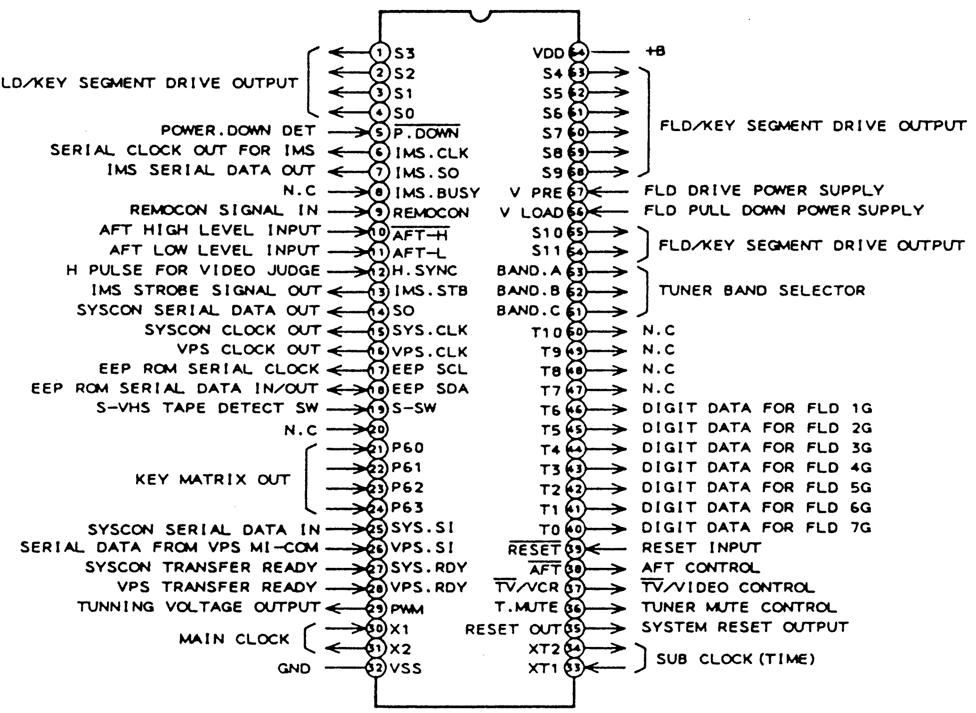
V53C464AP (64 k x 4 BIT D-RAM)


OE ①
WE ④
CAS ⑯
RAS ⑤
RAS CLOCK GENERATOR
CAS CLOCK GANERATOR
WE CLOCK GENERATOR
OE CLOCK LOGIC
DATA I/O BUS
COLUMN DECODERS
SENSE AMPLIFIERS
I/O BUFFER
② I/O 1
③ I/O 2
⑮ I/O 3
⑰ I/O 4
X0–X7
REFRESH COUNTER
8
256×4
A0~2
⑥
⑧
A3~7
⑩
⑭
ADDRESS BUFFERS AND PREDECODERS
X0–X7
ROW DECODERS
256
MEMORY ARRAY

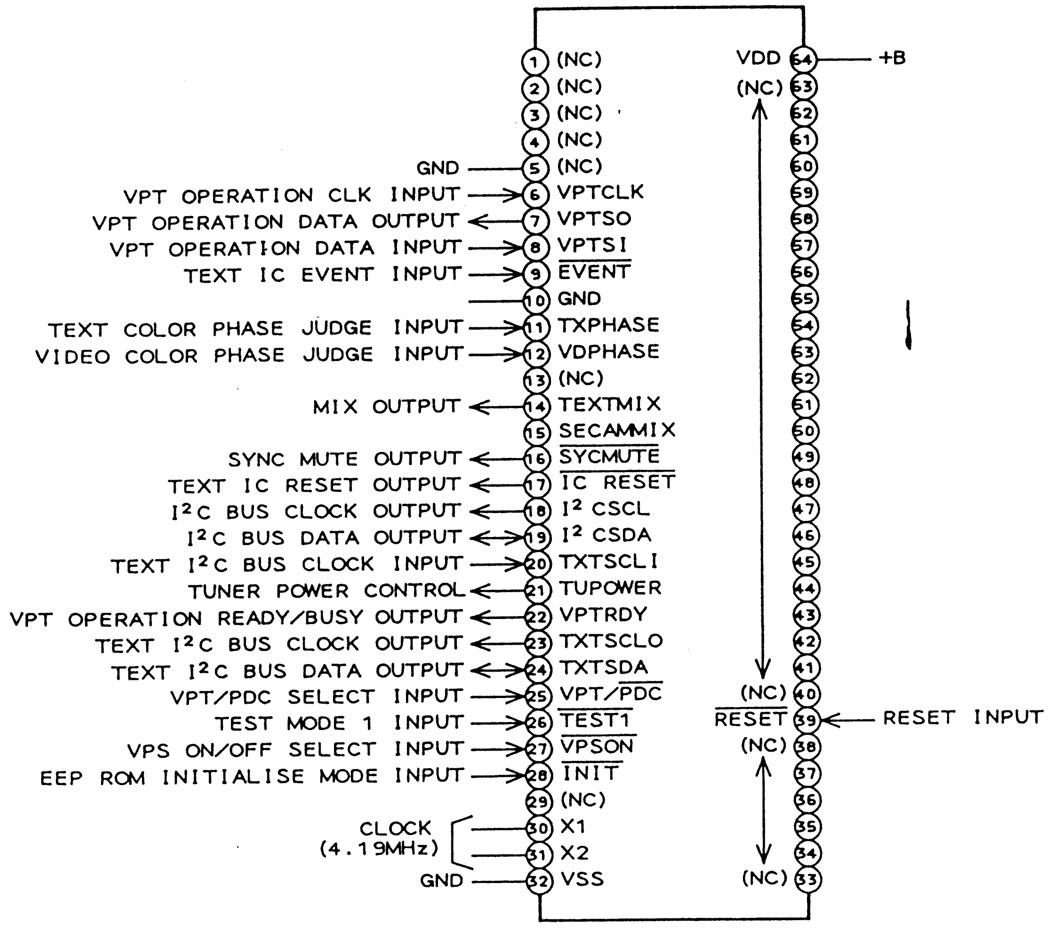
μPD6450 (CHARACTER GENERATOR)


STROBE PULSE INPUT ENABLE (L: ENABLE) ① BUSY
CLOCK INPUT ② CLK
STROBE PULSE INPUT ③ STB
DATA INPUT ④ DATA
+5V ⑤ VDD
INVERTED OSC OUTPUT ⑥ CK OUT
L, C CONNECTING PIN FOR DOT CLOCK OSC ⑦ L OSC OUT
L, C CONNECTING PIN FOR DOT CLOCK OSC ⑧ L OSC IN
GND ⑨ Vss
VIDEO IN ⑱ COMPOSITE VIDEO SIGNAL IN
VIDEO OUT ⑰ COMPOSITE VIDEO SIGNAL OUT
VVL ⑯ SYNC TIP LEVEL ADJ WHEN INTERNAL MODE
VBL ⑮ CHARACTER BLACK LEVEL ADJ
VCL ⑭ CHARACTER WHITE LEVEL ADJ
H SYNC ⑬ H.SYNC INPUT (LOW ACTIVE)
V SYNC ⑫ V.SYNC INPUT (LOW ACTIVE)
X OSC OUT ⑪ CRISTAL CONNECTING PIN
X OSC IN ⑩ CRISTAL CONNECTING PIN

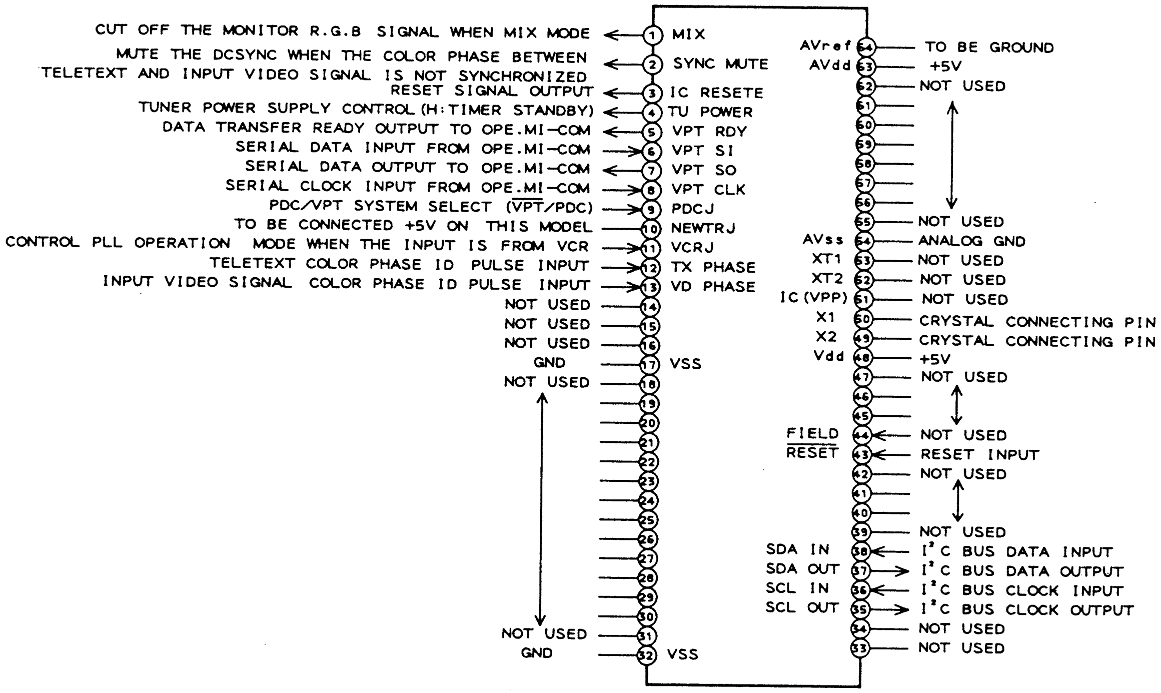
μPD75217CW (OPERATION MI-COM)


FLD/KEY SEGMENT DRIVE OUTPUT ① S3 ② S2 ③ S1 ④ S0
POWER.DOWN DET ⑤ P.DOWN
SERIAL CLOCK OUT FOR IMS ⑥ IMS.CLK
IMS SERIAL DATA OUT ⑦ IMS.SO
N.C ⑧ IMS.BUSY
REMOCON SIGNAL IN ⑨ REMOCON
AFT HIGH LEVEL INPUT ⑩ AFT-H
AFT LOW LEVEL INPUT ⑪ AFT-L
H PULSE FOR VIDEO JUDGE ⑫ H.SYNC
IMS STROBE SIGNAL OUT ⑬ IMS.STB
SYSCON SERIAL DATA OUT ⑭ SO
SYSCON CLOCK OUT ⑮ SYS.CLK
VPS CLOCK OUT ⑯ VPS.CLK
EEP ROM SERIAL CLOCK ⑰ EEP SCL
EEP ROM SERIAL DATA IN/OUT ⑱ EEP SDA
S-VHS TAPE DETECT SW ⑲ S-SW
N.C ⑳
KEY MATRIX OUT ㉑ P60 ㉒ P61 ㉓ P62 ㉔ P63
SYSCON SERIAL DATA IN ㉕ SYS.SI
SERIAL DATA FROM VPS MI-COM ㉖ VPS.SI
SYSCON TRANSFER READY ㉗ SYS.RDY
VPS TRANSFER READY ㉘ VPS.RDY
TUNNING VOLTAGE OUTPUT ㉙ PWM
MAIN CLOCK ㉚ X1 ㉛ X2
GND ㉜ VSS
VDD (64) +B
S4 (63) S5 (62) S6 (61) S7 (60) S8 (59) S9 (58) FLD/KEY SEGMENT DRIVE OUTPUT
V PRE (57) FLD DRIVE POWER SUPPLY
V LOAD (56) FLD PULL DOWN POWER SUPPLY
S10 (55) S11 (54) FLD/KEY SEGMENT DRIVE OUTPUT
BAND.A (53) BAND.B (52) BAND.C (51) TUNER BAND SELECTOR
T10 (50) N.C
T9 (49) N.C
T8 (48) N.C
T7 (47) N.C
T6 (46) DIGIT DATA FOR FLD 1G
T5 (45) DIGIT DATA FOR FLD 2G
T4 (44) DIGIT DATA FOR FLD 3G
T3 (43) DIGIT DATA FOR FLD 4G
T2 (42) DIGIT DATA FOR FLD 5G
T1 (41) DIGIT DATA FOR FLD 6G
T0 (40) DIGIT DATA FOR FLD 7G
RESET (39) RESET INPUT
AFT (38) AFT CONTROL
TV/VCR (37) TV/VIDEO CONTROL
T.MUTE (36) TUNER MUTE CONTROL
RESET OUT ㉟ SYSTEM RESET OUTPUT
XT2 ㉞ XT1 ㉝ SUB CLOCK (TIME)

μPD75218CW (VPT/PDC MI-COM)


① (NC)
② (NC)
③ (NC)
④ (NC)
GND ⑤ (NC)
VPT OPERATION CLK INPUT ⑥ VPTCLK
VPT OPERATION DATA OUTPUT ⑦ VPTSO
VPT OPERATION DATA INPUT ⑧ VPTSI
TEXT IC EVENT INPUT ⑨ EVENT
⑩ GND
TEXT COLOR PHASE JUDGE INPUT ⑪ TXPHASE
VIDEO COLOR PHASE JUDGE INPUT ⑫ VDPHASE
⑬ (NC)
MIX OUTPUT ⑭ TEXTMIX
⑮ SECAMMIX
SYNC MUTE OUTPUT ⑯ SYCMUTE
TEXT IC RESET OUTPUT ⑰ IC RESET
I2C BUS CLOCK OUTPUT ⑱ I2 CSCL
I2C BUS DATA OUTPUT ⑲ I2 CSDA
TEXT I2C BUS CLOCK INPUT ⑳ TXTSCLI
TUNER POWER CONTROL ㉑ TUPOWER
VPT OPERATION READY/BUSY OUTPUT ㉒ VPTRDY
TEXT I2C BUS CLOCK OUTPUT ㉓ TXTSCLO
TEXT I2C BUS DATA OUTPUT ㉔ TXTSDA
VPT/PDC SELECT INPUT ㉕ VPT/PDC
TEST MODE 1 INPUT ㉖ TEST1
VPS ON/OFF SELECT INPUT ㉗ VPSON
EEP ROM INITIALISE MODE INPUT ㉘ INIT
㉙ (NC)
CLOCK (4.19MHz) ㉚ X1 ㉛ X2
GND ㉜ VSS
VDD (64) +B
(NC) (63)
(NC) (40)
RESET (39) RESET INPUT
(NC) (38)
(NC) ㉝

μPD78014QXVPT1 (VPT/PDC MI-COM)


CUT OFF THE MONITOR R.G.B SIGNAL WHEN MIX MODE
1 MIX
MUTE THE DCSYNC WHEN THE COLOR PHASE BETWEEN TELETEXT AND INPUT VIDEO SIGNAL IS NOT SYNCHRONIZED
2 SYNC MUTE
RESET SIGNAL OUTPUT
3 IC RESETE
TUNER POWER SUPPLY CONTROL (H:TIMER STANDBY)
4 TU POWER
DATA TRANSFER READY OUTPUT TO OPE.MI-COM
5 VPT RDY
SERIAL DATA INPUT FROM OPE.MI-COM
6 VPT SI
SERIAL DATA OUTPUT TO OPE.MI-COM
7 VPT SO
SERIAL CLOCK INPUT FROM OPE.MI-COM
8 VPT CLK
PDC/VPT SYSTEM SELECT ($\overline{\text{VPT}}$/PDC)
9 PDCJ
TO BE CONNECTED +5V ON THIS MODEL
10 NEWTRJ
CONTROL PLL OPERATION MODE WHEN THE INPUT IS FROM VCR
11 VCRJ
TELETEXT COLOR PHASE ID PULSE INPUT
12 TX PHASE
INPUT VIDEO SIGNAL COLOR PHASE ID PULSE INPUT
13 VD PHASE
NOT USED 14
NOT USED 15
NOT USED 16
GND 17 VSS
NOT USED 18
19
20
21
22
23
24
25
26
27
28
29
30
NOT USED 31
GND 32 VSS
AVref 64 TO BE GROUND
AVdd 63 +5V
62 NOT USED
61
60
59
58
57
56
55 NOT USED
AVss 54 ANALOG GND
XT1 53 NOT USED
XT2 52 NOT USED
IC (VPP) 51 NOT USED
X1 50 CRYSTAL CONNECTING PIN
X2 49 CRYSTAL CONNECTING PIN
Vdd 48 +5V
47 NOT USED
46
45
FIELD 44 NOT USED
$\overline{\text{RESET}}$ 43 RESET INPUT
42 NOT USED
41
40
39 NOT USED
SDA IN 38 I²C BUS DATA INPUT
SDA OUT 37 I²C BUS DATA OUTPUT
SCL IN 36 I²C BUS CLOCK INPUT
SCL OUT 35 I²C BUS CLOCK OUTPUT
34 NOT USED
33 NOT USED